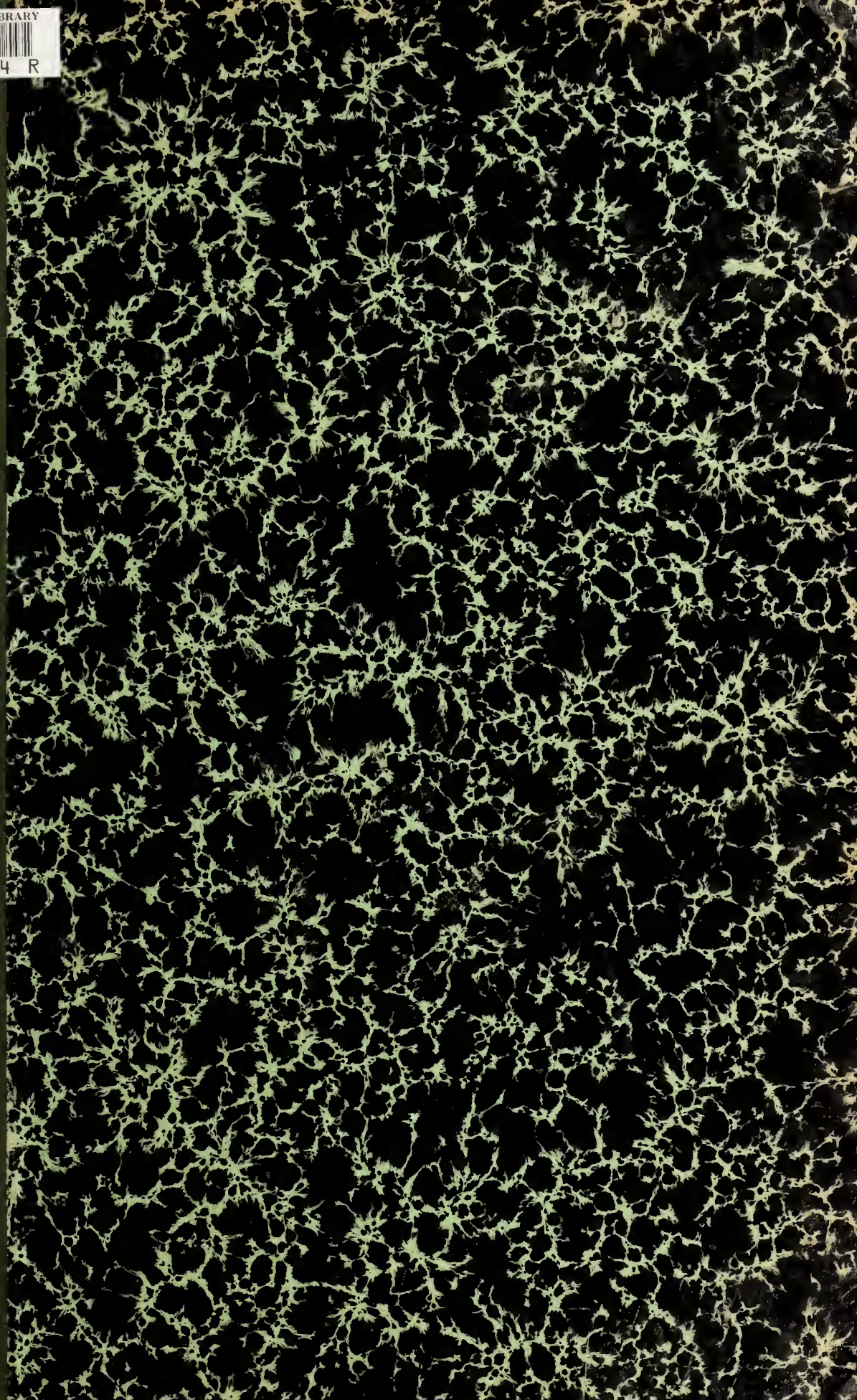


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THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

January, 1941

NUMBER 1

Rupture of the Kidney

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The purpose of this paper is to review nine cases of traumatic rupture of the kidney occurring in our urological practice during the past five years. The medical literature for the past decade has brought forth articles on the subject because of the apparent increase in the number of cases occurring throughout the country.

The incidence of traumatic rupture of the kidney according to McNeil is from 0.04% to 0.25% of surgical admissions to the general hospitals. Young reports 25 cases of injuries to the kidneys among 62,000 surgical cases at Johns Hopkins Hospital. The present day mode of travel on highways and in the congested city streets is cited as the factor responsible for the apparent increase. Three of the nine cases in our series were due to automobile accidents, two were in high school football boys, two were due to falls from a tree, one from an industrial accident, one case was due to a calculus rupturing through the cortex of a kidney which had previously been operated upon three times for the removal of stones.

There are several classifications of rupture of the kidney, but for practical purposes the one of Prather seems adequate.

1. Contusions.
2. Subscapular Rupture.
3. Laceration of Kidney Substance and Capsule.
4. Severance of the Pedicle.
5. Dislocations.

Any given case may fall into one or more of the groups.

The sequence of events that occur to cause rupture of the kidney was first studied by Kuster in 1896. Experimental work with measured blows to the abdomen and flanks of animals and to the body of cadavers demonstrates it to be difficult to rupture a kidney in a relatively fresh cadaver while the kidneys of living animals rupture with a moderate amount of force applied externally. This is due to the fact that a live kidney is more or less constantly tense with fluid due to its enormous blood volume. The impulse that ruptures the kidney apparently originates at the hilum and extends posteriorly causing an explosion-like rupture or rent. The kidney is compressed against the spine and posterior abdominal wall, the maximum amount of pressure being at the hilum of the kidney, which forces the fluid content of the kidney towards the capsule. This also explains why primary rupture of the pelvis of the kidney is the unusual rather than the usual finding at operation. However, it is occasionally encountered. The parenchyma of the kidney may rupture in any direction transversely or longitudinally, but the preponderance of findings at operation is the transverse type of tear. Others have reported, and we have found in two of our cases, a transverse tear of the kidney from the hilum anteriorly completely encircling the kidney to the hilum posteriorly causing a complete division of the kidney substance in two parts.

Read before the South Carolina Medical Association, Charleston, S. C., May 2, 1940.

Flexion of the kidney over the 12th rib is also given as a possible explanation of rupture in some cases. A kidney may be completely dislocated from its bed and forced downward posteriorly or it may rend the peritoneum and be found in the peritoneal cavity. There may also occur a complete severance of the kidney pedicle and ureter. One must bear in mind the possibility of dealing with a rupture of the kidney which is the former site of pathological change such as lithiasis, hydronephrosis. Rupture of a horseshoe kidney has also been reported, as well as rupture of an unilateral kidney with congenital abscess of one kidney. Four such cases have been reported, all of which terminated fatally. Fortunately only one of our cases had preceding renal pathology.

The symptoms of rupture of the kidney in their sequence and relative importance are:

Shock—Hematuria—Pain—Tumor formation due to hemorrhage.

The amount of shock is not always an indication as to the severity of the rupture. On the other hand, when one encounters profound shock, he may be reasonably sure that he is dealing with a serious injury with likely severance of the pedicle of the kidney, or else it is associated with or complicated by injury to other organs. Moderate shock which is characterized by nausea, vomiting, thirst, pallor, cold, clammy perspiration, general weakness, moderately rapid pulse, and subnormal temperature is the usual occurrence in uncomplicated cases of rupture of the kidney.

Gross, well mixed hematuria in the first voiding is nearly always present. The amount of hematuria is in no way significant as to the amount of injury the kidney has sustained. Slight injuries to the kidneys, such as concussions, or contusions, give findings of gross blood in the urine. However, after injury is sustained and one is suspicious of kidney involvement, the urine should be secured for immediate examination. If the patient is unable to void, a catheterized specimen should be obtained. In the event of negative findings of blood, one should do repeated examinations on each voiding for several days until the patient is well on the road to recovery, or the symptoms have lead to surgical intervention. When there is a large amount of bleeding

down the ureter, the blood might coagulate in the bladder forming a massive amount of blood clots which will render voiding extremely difficult or impossible. It is highly important in this type of case for the bladder to be cleansed of blood clots by evacuation. The absence of hematuria, when other findings suggest a damaged kidney, does not mean at all that the kidney has not received extensive and irreparable damage. There may be complete severance of the ureter so that no blood clot will pass into the urinary bladder, or the pelvis of the kidney may be so filled with blood clots as to obstruct the ureter at the pelvo-ureteral junction.

Pain is a constant finding in all cases of rupture. The amount of pain is in no way diagnostic as to the severity of the lesion or as to the indication for treatment. This is borne out by the unusual patient of Kerwin's who was symptomless for ten days following complete traumatic division of the kidney. In all of our cases, pain in the lumbar region at the site of the injury associated with muscular rigidity of the abdominal wall and an apparent spasticity of the diaphragm was present. All our patients asked for or welcomed sufficient doses of morphine to render them more comfortable.

Tumor formation is dependent upon the amount of hemorrhage present in the perinephritic space and the length of time that has elapsed between the time of the injury and the bimanual examination. Where there is rather extensive hemorrhage, one usually has no difficulty in eliciting tumefaction on the injured side by bimanual examination and palpation of the abdomen. There may be rather extensive hemorrhage without palpable tumor formation, the blood escaping either into the peritoneal cavity or down the psoas muscle into the iliac fossa.

Diagnosis is made clinically by history of injury, symptoms of shock, pain, hematuria, tumor formation. The diagnosis of rupture of the kidney should be confirmed by urological studies. The first method of choice is by intravenous urography. In the average case, the patient's condition is such that this procedure can be carried out without added shock or producing further complications. The findings

after intravenous dye has been injected, with plates made five, fifteen, and forty-five minutes will usually show a diminished or retarded function in the injured kidney. It may, or may not, show evidence of urinary extravasation. We can be assured, however, that the injured person has a relatively normal, healthy, uninjured kidney that is sufficient to sustain life in the event surgical removal of the kidney becomes necessary.

There is divided thought as to the indications or contraindications for cystoscopic studies which include ureteral catheterization and retrograde pyelograms to an injured kidney. There are some who teach that the above procedures are always contraindicated. They give as their reasons the addition of shock and the danger of infection following such procedures. When studies by intravenous urography show unmistakably and clearly that surgical intervention is justified or indicated, there is no reason to proceed with ureteral catheterization and retrograde pyelogram. Where clinical evidence is indicative of severe injury and intravenous urography does not clearly demonstrate the necessity of surgical intervention, then, I am surely of the opinion that retrograde studies should be made. In one of our cases, we could not demonstrate by intravenous urography that there was sufficient evidence to justify surgery. We postponed the operation and awaited further developments. The indications for surgical intervention became more clear as time progressed. I unhesitatingly did a retrograde catheterization and pyelogram which clearly demonstrated rupture and extravasation. No hard, fast rule can or should be laid down in any given case. One should use his diagnostic armamentarium sufficiently to establish as nearly correctly as possible the extent of the injury so as to proceed with the best method of treatment indicated in that particular case.

Where the clinical findings are of a mild nature and one is reasonably sure that he is dealing with a simple concussion to the kidney, expectant treatment is the procedure of choice. The immediate treatment resolves itself into symptomatic care with the usual measures; morphine for the relief of pain, warmth as applied by external heat, fluid balance and

transfusion. As to the indication for surgical approach to the injured kidney, there are some who advocate expectant treatment rather than surgery in the majority of cases. Squires states that 70% of all injuries to the kidney will cure themselves spontaneously without surgical interference. It is my opinion that in a ruptured kidney with hemorrhage and extravasation of urine surgery to the injured kidney is definitely indicated. Where one encounters severe laceration and pulping of the kidney substance with extensive hemorrhage, a nephrectomy should be done at once. Where lacerations to the kidney have occurred, without great loss of blood, and the hemorrhage is readily controlled, repair of the laceration, either by mattress suture or with ribbon gut, is more conservative. In some cases, where only rupture of the pelvis has occurred, or where there is a simple laceration to the capsule, drainage may be the only procedure necessary. Adequate drainage should be established in all cases operated. In our small series of nine cases, we have operated upon eight, removed four kidneys, and repaired four. All but one case at this time are living. We have practiced in our cases conservative measures as to surgical repair where we thought practical. Of the four cases in which repair was done and the kidney left, one had symptoms referable to the kidney at intervals since his injury and operation. Where laceration of the kidney is encountered and repair seems the best and most justifiable procedure at the time of operation it may not at all have been the procedure of choice after one studies the case over a period of years. Any injury to the kidney which incurs laceration whether operated upon or not is the probable site for later pathological development such as hydronephrosis, lithiasis, or chronic infection by virtue of the fact of abnormal rotation of the kidney due to its injury or by scar tissue formation with adhesions following normal repair, both non-surgical and surgical. These pathological complications may give rise to further systemic involvement such as arterial hypertension. One may be faced with the necessary removal of a kidney that has been injured several years prior to the development of the symptomatology and findings of which the patient is complaining. I have re-

Age	Sex	Kidney	Operation	Injury	Result
12	M	Left	Nephrectomy	Fall from tree	Cured
28	M	Left	Repair	Fall from tree	Cured
15	M	Right	Nephrectomy	Football	Cured
16	M	Left	Nephrectomy	Football	Cured
30	M	Right	Nephrectomy	Industrial (steam shovel)	Cured
39	M	Left	Repair	Auto accident	Cured
36	M	Left	None	Auto accident	Cured
42	M	Left	Repair	Auto accident	Death (Pneumonia)
46	M	Left	Repair and stone removal	Calculus—3 previous operations—cough	Cured

moved kidneys from patients who gave a definite history of injury associated with pain and hematuria, and had hospital treatment without surgery.

DISCUSSION

DR. RAVENEL: Dr. Wyman has covered the subject so completely that there is little to add.

Nature is kind to us by providing protection for the vital organs and as in the case of the kidneys, duality. Mobility of the kidney is probably another reason why renal damage is comparatively rare in modern industrial and automobile accidents.

There is no unanimity of opinion as to the proper management of these cases.

In the past, radical surgery was the order. Now conservative surgery or a policy of watchfully waiting has replaced the old radicalism. The diagnosis is generally quite easy but by no means is the question of treatment so easy. Generally it is not necessary for an immediate decision. The shock in the severe cases requires your first attention. Absolute

rest, morphine, blood transfusions, and consultation with an abdominal surgeon for possible damage to liver, spleen or intestine is our routine. In all cases except those where the renal pedicle is involved or the kidney has been exploded and fragmented, surgical repair or a more conservative approach with later operation if necessary will probably save more lives. This gives one an opportunity to try intravenous urograms and if this fails, then possibly the more questionable procedure of retrograde pyelography to determine the degree of extravasation, if any. As most of these kidneys lose only about 50% of their function, it is quite worthwhile trying to repair and conserve the kidney. In a few cases a later nephrectomy may become necessary because of destruction by fibrosis and obstruction. The possibility of sarcomatous degeneration later has been pointed out but this must be extremely rare.

Dr. Wyman has had an unusual number of the severe cases with mutilation of the kidney. He deserves great credit for his excellent surgical judgment and for his good results.

DILLON COUNTY MEDICAL SOCIETY REPORT

The November meeting of the Dillon County Medical Society was held on Tuesday, November 26, at 7:30 P. M. The Society was entertained at the home of Dr. and Mrs. L. Wade Temple in Lake View where a delightful dinner was served. Dr. Temple is the Vice President of the County Society.

The speaker of the evening was Dr. J. Buren Sidbury, Pediatrician, of Wilmington, N. C., who addressed the Society on "Prophylaxis and Treatment of Acute Infectious Diseases in Children." Dr. Sidbury is a Fellow of the American College of Physicians, a member of the American Pediatric Society and the American Academy of Pediatrics. After the address

the meeting was turned into a Round Table discussion on the subject. Dr. Sidbury was accompanied to Lake View by Dr. G. M. Koseruba, Resident in Medicine of the James Walker Memorial Hospital of Wilmington.

Among distinguished guests present were Dr. H. M. Baker and Dr. T. C. Johnson of Lumberton, N. C.; Dr. H. S. Gilmore of Nichols; Dr. R. F. Elvington of Lake View; Dr. R. F. Darwin and Dr. W. C. Bissette both of Dillon. Members present were: Dr. Temple of Lake View; Dr. E. Bryan Michaux, Dr. D. M. Michaux, Dr. W. V. Branford, Dr. B. F. Hardy and Dr. J. H. Pearce all of Dillon; Dr. F. L. Carpenter and Dr. W. S. Bethea both of Latta.

The December meeting was held at the Wheeler Hotel in Dillon.

The Differentiation of the Common Crises in the Cerebral Circulation

WALTER R. MEAD, M. D., FLORENCE, S. C.

I have chosen this subject for discussion because the cerebro-vascular crises and accidents which will be mentioned are incidents of everyday occurrence, are striking in their manifestations and not infrequently give rise to much difficulty in diagnosis. Because some of them carry a very grave prognosis and others are much less serious in their implication, it becomes a matter of considerable practical importance to be able to differentiate with fair degree of certainty between them.

The conditions which will be reviewed briefly include cerebro-vascular spasm, cerebral embolus, cerebral thrombosis, intra-cerebral hemorrhage and spontaneous subarachnoid hemorrhage. For purposes of completeness it would be well to mention also another group of cases of great clinical interest—the so-called “hypertensive cerebral crises.” These occur in patients suffering from high blood pressure with or without obvious renal disease and are not to be confused with true uremic manifestations. The hypertensive crisis mentioned results from unusual exacerbation of the blood pressure. During the attack the patient complains of severe headache often associated with vomiting, drowsiness or even coma and occasionally convulsions. Papilledema is often noted in examination of the discs. The symptoms of such a crisis develop suddenly and subside quite rapidly with relief of the abnormally elevated blood pressure. Undoubtedly cerebral edema is the important underlying cause of the symptoms which are commonly taken to presage a more serious cerebral vascular catastrophe; such a patient is commonly said to be “threatened with a stroke.” Such time honored measures as phlebotomy, drastic saline purgation and vasodilatation with nitrites have their place in the therapy of these episodes, whereas similar heroic measures

are more apt to do harm than good if employed with the usual run of cerebro-vascular crises.

Figures bearing on the relative frequency of the various types of cerebro-vascular crises differ widely depending on whether autopsy or clinical material is used. Merritt and Aring (1) have demonstrated this point very well in their study of 245 cases which came to necropsy and 604 cases which were observed carefully from a clinical standpoint. In the necropsy group 47 percent showed hemorrhage, 43 percent thrombosis and 10 percent embolus. There were no cases of subarachnoid hemorrhage. A striking difference is noted in the group which was seen clinically and did not come to autopsy; here only 21 percent were felt to have hemorrhage while 66 percent were classed as cerebral thrombosis, 5 percent cerebral embolus and 8 percent subarachnoid hemorrhage. The reason for this discrepancy in figures is that more patients with thrombosis recover while the more fatal cerebral hemorrhage cases come much oftener to autopsy and swell the percentage of that group until it exceeds the thrombosis group. Similarly the subarachnoid hemorrhage cases are rarely fatal, which adds to the relative preponderance of hemorrhage cases in the autopsy controlled groups. It is probably safe to conclude that in the general run of cases of cerebro-vascular accidents about 60 percent will be thromboses, about 30 percent will be hemorrhages and the remaining 10 percent will be divided between emboli and subarachnoid hemorrhages.

Before entering into a differential description of the various forms of cerebral crises, it would be well to consider certain anatomical and physiological factors which have an important bearing on the maintenance of the cerebral circulation and consequently of cerebral function. Quite probably the state of cerebral circulation at any given moment is

¹Presented at Founders' Day Clinics — Medical College of the State of South Carolina, November 7, 1940.

the result of the combination of influences resulting from vaso-motor control and systemic blood pressure. Add to these two the item of abnormalities in the vessel walls and we have the three fundamental factors whose interplay produces the various crises under discussion.

The abnormalities in the vessel walls which play important roles in production of these crises are arteriosclerosis and congenital aneurysms. Arteriosclerosis provides not only a fragile, brittle wall easily susceptible to rupture, but with its narrowing and tortuosity of the lumen of the vessel together with the roughening of the intima, it affords a point in the circulation where slowing of the blood stream would allow ready attachment for a thrombus. Congenital aneurysms occur frequently at the bifurcations of the large vessels at the base of the brain in connection with the circle of Willis. Although significant of no diseased condition, they do represent points of real weakness and frequently give way during periods of transient hypertension producing the classical picture of subarachnoid hemorrhage. (2)

Fluctuations in systemic blood pressure undoubtedly precipitate many of the emergencies in the circulation of the brain. The transient exacerbation of blood pressure in a hypertensive individual as the result of exercise or emotional states, or the increased strain on the cerebral vessels as the result of lifting, straining at stool, coughing or sneezing frequently proves too much for the weak spots in the wall of some vessel. Nor are all the dangers associated with hypertension; transient hypotension, resulting in slowing of the blood flow through narrowed, tortuous, sclerotic vessels often provides the ideal combination of factors to result in thrombus formation. (3) Such transient periods of low blood pressure often follow prolonged bed rest, surgical operations, especially when narcotics are used freely in the post-operative period, infections, especially influenza, and they sometimes result from excessive exertion or excessive emotional strain, factors which, in moderation, might even induce an elevation of pressure.

The least serious, but, at the same time, probably the most dramatic of these crises in

cerebral circulation is the simple, uncomplicated arterial spasm. Naturally confirmation of such phenomena is lacking because of the evanescent character of the attack and the impossibility of direct visualization of the arteries in the brain. Clinical evidence pointing to the existence of such transient attacks of vaso-constriction is overwhelming, as the following case illustrates:

A fifty-four year old white woman who had suffered from hypertension for a number of years and had had numerous fleeting attacks of numbness in the right arm was seen one morning about thirty minutes after she had suddenly developed weakness of the right side of the body. For some time before I reached her she had been unable to move the right leg or arm, could not swallow and was unable to speak intelligibly. All of these symptoms had disappeared completely by the time I examined her and I was about to leave the house when she made a peculiar sound and indicated that again she was unable to speak. Reexamination now showed complete flaccid paralysis of right arm and leg, deviation of tongue to the right and speech reduced to unintelligible mumbling. Within ten minutes she began to move her hand, then her leg, and during an interval of not more than two minutes, her speech returned to normal and full strength was restored in the muscles of the extremities. During the ensuing eighteen hours she had no less than ten such seizures, each following the same pattern beginning with thickness of speech and ending after about ten minutes with complete clearing of all motor weakness. The last attack never cleared—obviously the repeated spasms at the same point in the blood vessel had finally succeeded in affording lodgement for a thrombus. Her subsequent clinical course has been that of cerebral thrombosis with permanent weakness of the right side and personality changes.

Many patients with essential hypertension have sudden onset of muscular weakness, thick speech, inability to swallow, parasthesias of an extremity—all of which clear up as suddenly as they arise. There is considerable evidence to suggest that atheromatous changes in blood vessel walls render them unusually susceptible to vaso-motor stimuli. I have been impressed re-

peatedly by the similarity of the angiospastic phenomena in the coronary and cerebral circulation. The pain of angina pectoris is the clinical counterpart of transitory paresis and aphasia resulting from impaired circulation in localized areas in the brain. And, to pursue the analogy further, just as repeated attacks of angina pectoris frequently culminate in coronary thrombosis, so recurrent attacks of cerebral angiospasm are frequently forerunners of cerebral thrombosis.

The clinical manifestations of cerebral thrombosis are so varied that it is frequently difficult to be positive that one is dealing with a cerebral accident at all. Of course the major varieties characterized by gross paralysis are instantly recognizable as serious intracranial catastrophes and will be discussed in more detail in connection with their differentiation from cerebral hemorrhages. However, there are probably even more numerous instances of cerebral thrombosis which occur in the so-called silent areas of the brain and make their presence known in most unorthodox fashion. One common manifestation of such an accident is a temporary amnesia—the patient, without any warning, will express some confusion as to his whereabouts, will forget the events that have transpired in the preceding two or three hours and may never be able to recall them. Or there may be an attack of choking and strangling due to a sudden weakness of the muscles of deglutition but because of its transitory character no significance is attached to it. Attacks of “acute indigestion” often represent focal lesions in the region of the nucleus of the vagus nerve sending a storm of impulses down into the abdominal viscera. Two salient points characterize such attacks; first, the suddenness of onset in contrast to other illnesses with which it may be confused, and second, the rapid development of personality changes. Alvarez (5) summarized the problem succinctly in this one sentence: “A lifetime of perfect health may be terminated at a certain minute of a certain day.” After some trivial upset such as those just mentioned the patient may never seem quite the same. He often changes from a normally self-reliant individual of wide interests to a self-centered hypochondriac whose conversation revolves about

a thousand and one complaints, both real and imaginary. He becomes depressed, emotionally unstable and filled with ominous forebodings. These lesser thromboses in the brain pose innumerable problems in differential diagnosis since they may induce disturbed function in practically every anatomical system of the body.

The major type of cerebral thrombosis, the type associated with gross paralysis of important muscle groups, together with the cases of cerebral hemorrhage, comprise about 90 percent of the cerebral vascular accidents which are seen on any hospital service. These two conditions have many common symptoms and signs making the problem of differential diagnosis quite difficult. But since the immediate prognosis for life and the ultimate prognosis for return of function is quite different in the two lesions, it is necessary that such differentiation be made.

In arriving at a decision whether the patient has a cerebral hemorrhage or cerebral thrombosis, the following considerations have an important place:

1. *The age of the patient*—the average age of the patient with cerebral hemorrhage is somewhat lower than that for patients with thrombosis; whereas cerebral hemorrhages occur quite frequently between the ages of 40 and 50, cerebral thrombosis rarely appears as early.

2. *Modes of onset*—severe headache, vomiting, immediate unconsciousness and convulsions, one or all, frequently mark the onset of a cerebral hemorrhage and rarely characterize the development of a cerebral thrombosis. We are all familiar with those patients whose vascular occlusion occurs so quietly that it fails to waken them during the night and they are only aware of the trouble when they attempt to get out of bed the next morning.

3. *Progression of symptoms*—from the very nature of the underlying pathological process it is obvious that a thrombotic occlusion of a cerebral vessel produces its maximum symptoms at the outset, while a hemorrhage will continue to involve new areas in the brain resulting in a gradual spread of symptoms in distant structures, one of which is the tempera-

ture regulating center resulting in rapid rise of fever.

4. *Blood pressure*—is more frequently found elevated in cerebral hemorrhage than in thrombosis.

5. *Abnormalities in breathing*—the depth, rate, rhythm, and sound of breathing are much more frequently disturbed in cerebral hemorrhage.

6. *Arteriosclerosis*—is a much more universal finding in cases of cerebral thrombosis.

7. *Abnormalities of the eyes* — cerebral hemorrhage is usually the cause of (a) conjugate deviation of the eyes, (b) unilateral dilatation of the pupils, or (c) fixation of the pupils.

8. *Stiffness of the neck and Kernig sign*—is rarely found in cerebral thrombosis but is present in over half the cases of cerebral hemorrhage.

9. *Bilateral Babinski*—occurs twice as frequently with hemorrhage as with thrombosis.

10. *Elevation of leukocyte count* — above 12,000 is the rule with hemorrhage and is rare with thrombosis.

11. *Bloody cerebro-spinal fluid* — is never found in cerebral thrombosis but occurs in 75 percent of the cases of cerebral hemorrhage. In the latter condition also are found high cerebro-spinal fluid pressures, whereas the thrombotic process has a much less pronounced effect on the intracranial hydrodynamics.

12. *Period of survival*—the fact that a hemiplegic individual survives to get out of bed is presumptive evidence that he had a thrombosis rather than a hemorrhage.

Having weighed the evidence and having decided which of the two conditions most probably exists, it is now possible to advance some opinion as to the course the illness will pursue. If the lesion is a hemorrhage, there is the certain knowledge that a cerebral hemorrhage of any appreciable size is nearly always fatal. Death may occur within a few hours, never instantaneously; but in 90 percent of the cases (6) the patient will succumb within two weeks. If unconsciousness persists over 24 hours the prospects of survival are very bad and the prospects of recovery of function are nil (7). If the lesion is a thrombosis, the prospects of surviving the immediate attack are compara-

tively good provided the patient is not in deep coma or showing serious disturbance of the respiratory center. And if there is some sign of returning function in the paralyzed extremity during the first week, there is a good reason to hope for a fairly successful outcome as far as recovery of useful function is concerned. However, in advancing a favorable prognosis in the case of cerebral thrombosis, two factors should always be remembered; first, the great tendency for the vascular lesion to recur, and second, the almost invariable development of unpleasant personality changes. This last point is too little emphasized so perhaps I will be pardoned for making brief reference to it.

Among the personality changes, probably the most commonly observed are in the emotional field; after a vascular catastrophe of this type the patient bursts into an embarrassing flood of tears at the sight of an old friend or the memory of some past event will call forth signs of poignant grief. The memory for recent events becomes seriously impaired resulting in endless repetitions of questions. Judgment vanishes, frequently with disastrous results to business. In general the mental capacity of such patients is sharply circumscribed, their interests are limited and their outlook on life is morose. Combined with this they exhibit such unpleasant traits as arbitrariness, fault finding, childishness and selfishness, making them most ungraceful recipients of the care of those who must look after them in their enfeebled mental condition. Occasionally we see a rare individual who comes through the trying experiences of a cerebral thrombosis with his personality unchanged but such a happy result would almost make one doubt the accuracy of his original diagnosis. At any rate I have always found it helpful to take the relatives aside and warn them what the future holds in store after the shock of the initial vascular accident is over. At such times the relatives are usually grateful that the life of the victim has been spared and they face the future with enthusiasm born of a desire to have the patient alive at whatever cost; later they frequently wonder if, after all, the quickly fatal cerebral hemorrhage is not the most merciful variety of serious vascular accident

in the brain. Personally I am convinced of that fact.

Some of you may recall that remarkable description of the struldbrugs in "Gullivers Travels," those wholly unpleasant old men of the island of Luggnagg who "were not only opinionated, peevish, covetous, morose, vain, talkative; but incapable of friendship, and dead to all natural affection. Envy and impotent desires are their prevailing passions—they have no distinction of taste, but eat and drink whatever they can get, without relish or appetite. . . In talking, they forget the common appellation of things and the names of persons, even those who are nearest friends and relations. For the same reason, they can never amuse themselves with reading, because their memory will not serve to carry them from the beginning of a sentence to the end; and by this defect they are deprived of the only entertainment whereof they might otherwise be capable." Undoubtedly Jonathan Swift must have had intimate contact with an old apoplectic to be able to write that.

It is quite easy to confuse the picture of cerebral embolus with that of cerebral hemorrhage or thrombosis. The very sudden onset of apoplectic symptoms, often associated with coma, headaches, vomiting or convulsions, may simulate cerebral hemorrhage but more often the differentiation must be made between embolus and cerebral thrombosis. The deciding factor here is the discovery of some focus for the embolus. In the great majority of cases that focus is an obviously diseased heart; a heart which is the seat of active bacterial endocarditis; a heart with mitral stenosis and auricular fibrillation; or, a heart which has recently had an infarct which might give attachment to a mural thrombus. The presence of fairly evident heart disease and the very sudden onset of symptoms usually leave no doubt as to the diagnosis.

Spontaneous subarachnoid hemorrhage is the last of the common crises of the cerebral circulation which I want to discuss. I say common advisedly because in the last eight years I have seen some forty patients suffering from this condition; during one two week period seven such patients were admitted to the medical service of the McLeod Infirmary.

Ordinarily this diagnosis is one of the easiest to make of all cerebro-vascular troubles and usually the opinion is quickly and definitely substantiated. The cardinal symptoms and signs of subarachnoid hemorrhage are these four:

First: Sudden onset usually with violent occipital headache.

Second: Immediate nausea or vomiting.

Third: Stiff neck and positive Kernig sign.

Fourth: Uniformly bloody or xanthochromic spinal fluid. Unlike the other vascular accidents about the brain, focal neurological symptoms are usually lacking and when present usually involve one of the cranial nerves, commonly the third, since these nerves course along the base of the brain where the site of bleeding is located in the majority of cases. Bloody or xanthochromic spinal fluid is, of course, not pathognomonic of this condition. A similar bloody fluid could be obtained if a large intra-cerebral hemorrhage should rupture into the ventricle or dissect outward to break into the subarachnoid space; and about 75 percent of all intra-cerebral hemorrhages do that. The differentiation between the two conditions rests on the fact that intra-cerebral hemorrhages extensive enough to contaminate the subarachnoid space are always associated with coma and unmistakable paralyses, both of which are extremely rare in subarachnoid hemorrhage.

An interesting point to remember in this condition is that the urine often shows sugar for several days after the onset and it is quite possible to make a diagnosis of diabetic coma from the clinical picture. The following case illustrates this confusion:

A sixty year old white man had been discovered slumped over the steering wheel of his automobile one morning, quite unconscious, and with evidence of vomiting. He had left home the night before and his failure to return as expected had created considerable alarm. He was taken to a hospital in a neighboring city and there the catheterized specimen of urine reduced Benedict's solution sharply, whereupon blood sugar determination was done and a value of 285 milligrams percent obtained. A tentative diagnosis of diabetic coma was quite justifiably advanced by the attend-

ing physician who promptly began treatment with large doses of insulin and administered fluids parenterally. Within 24 hours the blood sugar had dropped to 100 milligrams percent, the sugar was no longer present in the urine; but the patient's stupor and general condition were little changed from that at the time of his discovery. At this point the pronounced rigidity of his neck was noted. Consultation was asked in view of this development; spinal tap was done, very bloody fluid secured, mentality cleared rapidly and the patient is now about and well.

As a general thing, patients suffering from subarachnoid bleeding impress the examiner as being much less seriously ill than is the rule with other forms of intracranial bleeding which might give rise to bloody spinal fluid. Exception should be noted, however, in the case of elderly people. In them the initial blow sustained by the brain at the time of the first quick rise in intracranial pressure not infrequently precipitates a prolonged somnolent state during which their existence is largely vegetative. For the most part, however, the picture of subarachnoid bleeding follows a pretty well established design which sets it apart from the usual run of cerebral vascular accidents on account of the severity of pain with retention of fairly normal mentality. In this group are found the majority of young persons who suffer from acute intracranial catastrophes.

The desirability of fairly positive differentiation between the various types of cerebro-vascular crises has been mentioned at the beginning of this discussion. There is much more than purely academic interest involved. In the first place, there is the question of prognosis. Instances of pure vascular spasm do not result fatally but they do suggest a pattern of events to come which may ultimately result in thrombosis. Cerebral hemorrhage is a very fatal disease carrying an immediate mortality rate of somewhere around 90 percent. On the other hand cerebral thrombosis is a much less serious threat to life but does carry with it a very real menace to mental health. Cerebral embolus is another very fatal condition, not only from the standpoint of the damage to the central nervous system, but because it implies a serious

underlying cardiac lesion and because it is only too often the precursor of embolic accidents elsewhere in the systemic circulation that will require hazardous surgical intervention. The prognosis in subarachnoid hemorrhage, on the other hand, is relatively good. My experience (8) has been that about 27 percent of these cases die and practically all the fatal cases can be spotted by the fact that they either show repeated hemorrhages before the signs of the first have cleared, or they are distinguished by particularly violent onsets with unconsciousness.

In the second place there is the question of treatment which must be modified to meet the requirements of the different situations encountered. The angiospastic patient must reduce the strain on his cerebral circulation; all possible irons must be taken out of the fire, responsibilities and worries brought down to a minimum, and frequent vacations arranged. The patient with hemorrhage or embolus is frightfully ill and will tax the ingenuity of his medical attendants to keep the spark of life burning by various heroic measures. The extremely high mortality rate in this group justifies taking unusual risks; it is not improbable that surgical intervention in these emergencies will play a much more important role in years to come than it has in the past (9). Cerebral thrombosis produces a condition characterized more by disability than by actual serious illness. Efforts here should be directed to getting the patient out of bed as quickly as possible after the initial shock and then make him shift for himself in every conceivable way. In rather sharp contradistinction to the measures outlined above, the therapy of subarachnoid hemorrhage has very positive and pathologically sound objectives, to reduce intracranial pressure and remove foreign matter (blood) by repeated spinal taps and, by enforcing rigid bed rest for six weeks, to promote complete healing of the rent in a superficial cerebral artery.

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Congenital Megacolon, Report of a Case Treated by Sympathectomy

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Congenital megacolon has become a well recognized clinical entity since Hirschsprung described the disorder in 1886. The chief symptoms are those of severe chronic constipation with marked abdominal enlargement in an infant or young child. Males predominate over females in a ratio of 3.5 to 1. Difficulty with bowel movements frequently reaches the point of complete intestinal obstruction. Associated secondary manifestations include: flaring rib margins, thinning out of the abdominal wall with prominence of the superficial veins and diastasis recti, audible and visible peristalsis, symptoms of compression of the thoracic viscera, edema of the lower extremities, malnutrition and underdevelopment.

Medical treatment of megacolon has been largely symptomatic and palliative. Enemas are of some value, but cathartics and drugs stimulating peristalsis are relatively ineffective. Some of the milder cases reach adult life. Early death from obstruction or intercurrent infection is the rule. Spinal anesthesia has been employed to relieve acute obstruction.

Surgical treatment, up until ten years ago, was also unsatisfactory. The older operations

of colostomy, colectomy, or short-circuiting anastomoses carried a high mortality and now are of historic interest only. The modern operation of sympathectomy came about through the observation of Royle and his co-workers in Australia that improvement of bowel function occurred in children with spastic paraplegia after lumbar ganglionectomy. Numerous uniformly favorable reports have established sympathectomy as the treatment of choice in congenital megacolon of neurogenic origin.

While an obstructive factor has been postulated in some cases, the majority seem to present an imbalance between sympathetic and parasympathetic stimuli. Removal of the inhibiting sympathetic fibres allows peristalsis to proceed. The usual site of sympathectomy has been the plexuses over the lower aorta and sacral promontory. Removal of the left lumbar chain is also done in some cases.

CASE REPORT

H. C., a colored male, three and a half years of age, was admitted to the pediatric ward of Roper Hospital on October 19, 1937, with symptoms of intestinal obstruction. The mother stated that the abdomen had been distended since birth. There had been persistent constipation and intermittent obstipation. No bowel movements had occurred for four days before admission. Vomiting had been present for two days and increase in the size of the abdomen for one day. Aside from retarded de-

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Read before the Medical Society of South Carolina, November 26, 1940.

velopment no further history was elicited of symptoms contributory to the present illness.

Examination showed an underdeveloped negro boy weighing 28 pounds, with marked abdominal enlargement. The skin over the abdomen was thin and shiny. The rib margins flared outward. Audible peristalsis was present. There was an umbilical hernia of moderate size. The percussion note was generally tympanitic except for some dullness in the left lower quadrant. The sphincter tone seemed normal.

Radiograms after a barium enema revealed huge dilation of the entire colon with upward compression of the heart and lungs. Other laboratory tests, except for a hemoglobin of 57 percent, gave essentially normal findings. The stools were negative for parasites.

The diagnosis of congenital megacolon, or Hirschsprung's disease, was clear. While some results were obtained by enemas, little improvement in bowel movements took place over a period of three weeks and the necessity for operation became evident.

Under ether anesthesia a lower left rectus incision was made. The entire colon was greatly dilated measuring 10 cm. (4 inches) in diameter. The walls of the ascending and transverse colon were hypertrophied while that of the sigmoid seemed of normal thickness. The mesosigmoid was elongated. A small mesenteric attachment from the sigmoid to the anterior abdominal wall did not appear to cause any obstruction. The colon was packed with fecal material and had a sausage-like feel. The small intestine showed some gaseous distention. The posterior peritoneum was incised and a band of tissue removed over the aorta from the origin of the inferior mesenteric artery down to 2 cm. below the bifurcation. This tissue included the superior hypogastric plexus, the so-called presacral nerve. Further removal of nerve tissue around the first inch of the inferior mesenteric artery was then carried out. Although in addition excision of the lower left lumbar sympathetic chain would have given a more thorough denervation, this further procedure was too difficult technically because of the marked distention. Closure of the abdomen included repair of the umbilical hernia.

The post-operative course was satisfactory. Spontaneous bowel movements began on the fourth day and the distention gradually was relieved. The patient was discharged on the twenty-second day with his wound healed. On subsequent visits to the outpatient clinic the child was found to remain in good health and the mother reported that daily bowel movements continued.

The last examination on February 23, 1940, two and a half years after operation, showed the patient to weigh 42 pounds and to be in good condition. The lower portion of the abdomen was still somewhat protuberant, measuring 22 inches in circumference. On the other hand the ribs no longer flared nor were the heart and lungs compressed. Barium enema at this time showed the sigmoid still dilated while the remainder of the colon was of normal calibre. However, no attempt was made to balloon out the entire colon with a large amount of barium. Further check up has not been feasible.

DISCUSSION

The persistence of some enlargement of the colon has been reported although the functional results were good. The fact that the sigmoid remained dilated in our case suggested that the denervation of this portion of the colon was incomplete. However, the child did so well that we did not feel justified at the time in performing a second major operation, a left lumbar sympathectomy.

The amount of regeneration that may occur after sympathectomy in man is not well known. There is some recent evidence that the nerves do regenerate to some extent. However no reports of recurrence of obstructive symptoms after sympathectomy for megacolon have appeared. Since the power of ejaculation is abolished by presacral neurectomy in the adult, it will be of interest to observe whether sufficient regeneration over a period of years will cause this function to appear at maturity in these children.

Among the many indications for sympathectomy congenital megacolon is one of the most definite. In a series of eighteen cases upon whom sympathetic interruption has been performed in the Roper Hospital during the past three years the result in this case was in the most satisfactory group.

SUMMARY

A case is reported of congenital megacolon in a young child. The symptoms of severe obstruction were relieved by sympathectomy. Some enlargement of the abdomen persisted.

THE JOURNAL

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OFFICE OF PUBLICATION

Medical Building ----- Seneca, S. C.
 Subscription Price ----- \$3.00 Per Year

JANUARY, 1941

THE NATIONAL PHYSICIANS COMMITTEE CONTINUES ACTIVITY

A recent bulletin from the National Physicians Committee points out the necessity for continuing strenuous activity for the purpose of combating the increasing tendency towards political control of medicine. The bulletin notes that during the recent presidential campaign, much was said to indicate that both candidates were heartily opposed to socialized medicine, but views with a certain amount of skepticism the permanence and sincerity of these campaign announcements.

President Roosevelt said: "Neither the American people nor their government intend to socialize medical practice any more than they plan to socialize industry;" Mr. Willkie stated: "There is no one to whom socialized medicine is more repugnant than it is to me."

The Committee emphasizes the necessity for maintaining a public opinion which will exact such statements from political representatives and urges the active and vigorous continuation of a campaign to inform the public of the "aims, methods and philosophy of American Medicine."

The Management Committee of this organi-

zation feels that under present conditions, the need for the activities of the National Physicians Committee is greater and more pressing than ever, and calls on the profession generally to do everything it can to keep up the campaign to stimulate public interest and to aid in the campaign for the general object by contributing funds and by securing every possible sort of support.

COMMITTEE APPEALS FOR AID TO BRITISH

Among the several national organizations interested in rendering aid to Britain, the Medical and Surgical Supply Committee would seem to come closer to our own particular interests. Formed about six months ago, it has enlisted the assistance of many prominent physicians throughout the country, and has accumulated and forwarded to the medical centers of England a very large amount of such things as antitoxins, instruments, concentrated foods, codliver oil, and other essentials. The Committee states that many large drug and supply houses have contributed generously to the support of the work.

Dr. R. Barnwell Rhett of Charleston is a

member of the National Committee, and calls our attention to a special plea for operating sets and first-aid kits. While this plea was made as a Christmas appeal, the need is no less urgent now, and physicians sympathetic to the cause are asked to do whatever they can toward making the need known. A suggestion was made by the Committee that various clubs, lodges, etc., might be interested in purchasing an operating set at \$200.00 or a first-aid kit at \$70.00 as a contribution to the English cause. Several of the civic clubs in Charleston have already done so.

Full information may be obtained from Dr. Rhett. All contributions, however small, of instruments, old or new, drugs such as aspirin, iron, etc., vitamin concentrates, bandages, and anything useful in medical work will be welcomed by the Committee.

SCHOOL HEALTH EXAMINATIONS

When the revelations of the results of examination of men drafted for the once-great War indicated how numerous and how preventable were the physical defects of young adults, interest in preventive and corrective medical activities in the schools was stimulated tremendously. Studies of various sorts led to the planning of several programs, most of which were too ambitious for practical application, and some of them perhaps beyond the legitimate scope of the school system.

The American Academy of Pediatrics has been attempting to formulate a satisfactory type of program, facing the necessity for keeping on the middle ground between the cursory and the over-elaborate. Few school systems have the funds for carrying out the ideal type of medical work, and many delude themselves by considering that the rapid annual examination of all their pupils constitutes a worthwhile contribution to health. Fruitless comparison of the pupils' weight, with dubiously valuable tables, rapid glances at the vision chart, and the twirl of a tongue-depressor do not constitute a satisfactory examination and frequently the easier-going parent is lulled into false security by the knowledge that the child has had just such an inspection.

The Academy feels that the discovery of certain physical defects may be less important

than the contribution which the school physician might make along the line of investigation of poor routine and poor home surroundings and of the integration of health teaching with the whole school program. The teacher and the parent must be taught as well as the child, and the education of all of them in the knowledge of what constitutes adequate supervision, and how it is procurable, would result in benefits to everybody concerned, including conscientious practitioners in all fields.

THE SCIENTIFIC COMMITTEE CALLS FOR PAPERS

On Monday evening, January 6th, a meeting was held in Greenville, for the purpose of making tentative plans for the meeting of the Association in April.

The dates of the meeting are April 15th, 16th and 17th and headquarters will be at the Poinsett Hotel.

Dr. Frank Lahey of Boston is one of the invited guests. Several other prominent names have been proposed and steps are being taken to secure at once the promise of another special speaker.

It was suggested that in addition to the usual arrangement of the meeting, a banquet be held on Wednesday evening before the Ball and that some prominent speaker be heard at that time. Some discussion of arrangement for the entertainment of the members of the Association and members of the Woman's Auxiliary was also carried on.

Dr. Jack Jervey of Greenville is Chairman of the Scientific Committee. The Committee has expressed a preference for papers of general interest, rather than for the presentation of symposia. It is desired that requests for places on the program be sent in as soon as possible, so that the Committee can draw up its final arrangement.

Present at the meeting were: Drs. W. L. Pressly, President, Julian Price, Secretary, and J. I. Waring, Editor.

Members of the local Committee who attended were: Drs. C. C. Ariail, Brockman, White, Nachman, Tyler, Keitt Smith, Jack Jervey, Wilkinson, and Northrup.

The Officers and Committee expect to have a large and attractive meeting, with ample instruction and entertainment.

A NEW WAR JOURNAL

The American Medical Association has just added another promising member to its flourishing family of medical journals. With military preparedness so much in the foreground, the medical phase is an extremely important part of the whole movement. The need is obvious for a journal which will consolidate for ready reference scientific material applicable to war and its consequences.

WAR MEDICINE is on the way and will appear bi-monthly. Physicians in all fields will find much of value in the articles which are scheduled to appear. The Division of Medical Sciences of the National Research Council and the American Medical Association's Council on Medical Preparedness will furnish material relating to the emergency. There is no doubt that this Journal will reach the same high standard which is set by other publications of the National Association.

OBSTETRICS AND GYNECOLOGY

J. D. GUESS, M.D., GREENVILLE, S. C.

THE CONTROL OF POST-PARTUM HEMORRHAGE

That an ounce of prevention is worth a pound of cure is truly axiomatic in the case of post-partum bleeding. To avoid trauma to cervix and vaginal tract, to empty the uterus of all placental fragments and larger pieces of membranes, to avoid over-fatigue of the patient and the uterine muscle and to limit the depth of anesthesia are measures that strongly tend to prevent post-partum bleeding.

The nature of post-partum hemorrhage ranges from the continuous small trickle of blood to the dramatic and rapidly fatal gush. The one allows much time to ascertain its source and to employ measures to stop it, and yet it is frequently the cause of death, especially in already seriously anemic women, because its seriousness is underestimated or its presence is overlooked. The other requires quick thinking and almost as quick acting if the patient's life is to be saved. During hemorrhage a flabby relaxed uterus is prima facie evidence that the bleeding is coming from the placental site and calls for measures to bring about vigorous and sustained uterine contraction. But the type of labor and delivery which frequently precedes a relaxation of the uterus at the end of the third stage is often such as to

encourage lacerations of the cervix, rupture of the uterus and other serious trauma, and the sources of hemorrhage may be multiple. If strong contraction does not quickly control the bleeding such traumatism should be searched for.

A frequent cause for repeated hemorrhages after the control of an initial one from the placental site is the formation and retention of intrauterine blood clots. These should be looked for and purposely expressed after initial bleeding.

The retention of considerable portions of the placenta does not always give rise to immediate or early hemorrhage. But unless they are detached and soon expelled, they are most likely sooner or later to cause bleeding which may be dramatic and deadly. The inspection of the placenta after delivery should be more than cursory, and if the placenta does not appear to be intact, the interior of the uterus should be investigated at that time. It is safer to do so immediately after delivery than it is several hours or days later, for bleeding lowers resistance, bacterial invasion of the upper vagina and the cervix takes place very rapidly, and traumatic dilatation of the cervix will be necessary then before the hand can be inserted into the uterus.

Intruterine packing is not the quickest method of controlling uterine bleeding. Neither is it always effective in maintaining control once it has been established by other means. Its use under the best conditions carries with it some risk of infection. The pack must be placed skillfully and thoroughly, and the vagina should be snugly packed at the same time. When so used, it tends to control bleeding from traumatic wounds as well as from the placental site.

A much more quickly effectual measure is to massage the uterine fundus as it is flexed forward. This is most effectively done between an external hand and the closed fist which has been inserted into the vagina, external and anterior to the cervix.

A resourceful and busy obstetrician from a village in Mississippi used to love to tell of the hemorrhage he had controlled and the lives he had saved by injecting pituitary extract into the uterine muscle by passing a long needle through the abdominal wall in the mid-line and shortly below the navel.

Dr. E. W. Carpenter, many years ago stopped a serious post-partum hemorrhage by pushing a large chunk of ice up into the uterus and leaving it there. The clanging of the gong on the passing wagon gave him the idea when he needed ideas most.

Pituitrin may be given intravenously and it acts strongly and within a few moments, but there is a certain amount of danger of shock from its use. Several of the preparations of ergonovine, such as ergotrate, basergen, ergoklonin may be given intravenously safely and they act as promptly as pituitary extract and the action is more prolonged.

Once the hemorrhage is controlled the task is not completed. Having bled once, the patient's resources of blood are less, and a second hemorrhage would necessarily be more serious. Hence the uterus must be watched carefully and continuously until one is reasonably sure that the cause of the hemorrhage is operative no longer and that control is more than temporary.

Finally, even though one is faithful in remaining with his patient for the full obstetrician's hour after expulsion of the placenta, sometimes the lochia becomes so free as to constitute true post-partum hemorrhage. In anticipation of this it is wise to leave with the patient a dose or two of a potent preparation of ergot, with the instruction that it may be given at any time the flow is thought to be too free. To do so saves nervous energy, emergency miles, needless blood loss and occasionally it saves a life.

CHARLESTON COUNTY SOCIETY HOLDS ANNUAL MEETING

The 151st annual meeting and banquet of the Medical Society of South Carolina were held at the Fort Sumter hotel, December 17, 1940.

Dr. Joseph H. Cannon and Dr. T. E. Bowers continue their two years terms as president and vice-president, respectively. Dr. Joseph I. Waring and Dr. W. Cyril O'Driscoll were reelected secretary-treasurer and librarian, respectively.

Dr. George McF. Mood was elected a commissioner of the Roper Hospital. Dr. Wythe M. Rhett was elected to the board of censors and Dr. Robert S. Cathcart to the board of finance. Dr. Robert Wilson, Jr. was reelected delegate to the South Carolina Medical Association and the following were elected alternates: Dr. H. C. Robertson, Dr. Archie E. Baker, Dr. Robert B. Taft, Dr. F. Adelbert Hoshall, Dr. F. E. Kredel and Dr. Gustave P. Richards. Dr. Francis G. Cain and Dr. I. Ripon Wilson were elected to honorary membership.

Before the banquet the members and guests were served a punch presented by the former presidents. The banquet was followed by a number of informal talks, though there was no official speaker. Besides the members of the society, a large number of out-of-town guests attended the banquet.

Announcements have been made of the Fifth Annual Meeting of the New Orleans Graduate Medical Assembly, which is to be held on March 3rd through 6, 1941, just shortly after Mardi Gras.

There will be lectures, symposia, exhibits, luncheons, clinics, smokers, and New Orleans itself. Following the meeting a sixteen-day Caribbean Cruise will be available.

Announcement has been made that a new National Guard Medical unit will be organized in Columbia under the command of Captain R. W. Ball. The unit will comprise two officers and ten men and will be a part of the State's new anti-aircraft outfit.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

Oct. 25, 1940

Case of Dr. G. P. Richards

ABSTRACT NO. 422 (62229)

Student G. W. Scurry, (presenting).

History: A 29 year old negro laborer, admitted 11-6-39 with chief complaints of pain in the left side of the chest and shortness of breath. Around April 1st, 1939 he noted the onset of night sweats which continued for about 2 months with no other symptoms. About July 1st patient developed a cough productive of thick yellow sputum and accompanied by fever. One month later he began to have pain in the left side of his chest which grew progressively worse and radiated into the left epigastrium. Occasional attacks of vomiting occurred associated with paroxysms of coughing. During the first part of September, 1939 he began to have shortness of breath associated with increase of pain in his side which became so bad that he had to stop work 2 weeks later. No hemoptysis. Weight loss of about 20 lbs. in six months. No history of contact with tuberculosis.

Examination revealed a very thin, small negro man, with T. 97.2, P. 95, R. 24, BP 110/70. Pupils normal. Slight conjunctivitis. Nose and ears negative. Teeth poor and tongue coated, with moderate injection of pharynx. Tonsils atrophic. There was decreased movement of the right side of the chest and also of the left, but to a less marked degree. Dullness to percussion over lower 3/4 of right lung with increased whispered voice sounds. Dry Post-tussic rales over middle of right lung anteriorly and posteriorly. Dullness anteriorly over central portion of left lung. No rales heard, but bronchial breathing present. Heart normal size except for increase in area of dullness in upper portion of left border. Rhythm regular. No murmurs. A₂ accentuated. Abdomen negative. Extremities neg. Reflexes physiological.

Laboratory: 11-7-39

Urinalysis—negative.

Blood 11-6-39

Hb. 14 gms.

RBC 4,055,000

WBC 7,100

Polys 82%

Remained essentially

the same throughout.

Sed. rate 12-5-39: 35 mm. in 1 hr.

Sputum: 11-18-39—Odorless, clear, yellowish white, Mucus 3 plus, elastic fibers 2 plus, pus 3 plus, epith. cells 2 plus. Numerous exams. neg. for tubercle bacilli.

Pleural Fluid 12-7-39.

Dark red, sp. gr. 1.022

Smear resembles blood.

Many RBC, polys. 76%

Lymphs. 22%, Eosin.

2%.

Kolmer and Kline Neg.

Cultures of sputum showed hemolyzing and non-hemolyzing strep. with occasional fusiform bacilli and spirochetes.

Course: Low grade intermittent fever with elevation of 102.5 three days before death. 300 c. c. of bloody fluid removed from right pleural cavity on 12-7-39. Pain, cough and dyspnea continued. Patient quite dyspneic and lapsed into coma before death on 12-19-39.

Dr. Robert Wilson, Jr. (conducting): Mr. Hook, will you give us your analysis of this case?

Student Hook: I believe all the findings are consistent with a diagnosis of carcinoma of the lung, even though the patient is only 29 years old. We usually find this condition in the age groups around 50, but it is not unheard of in much younger individuals. Shortness of breath, cough, pain in the chest and bloody pleural fluid certainly suggest a malignancy of the lung. The production of purulent sputum could be caused by secondary infection of necrotic tumor tissue and the fever and weight loss would result from the systemic reaction to such an infection. On the other hand I don't think you can definitely rule out tuberculosis, but with as much destruction of lung tissue as there was apparently present, I think you would expect to find the tubercle bacillus in the sputum. The sedimentation rate is not of much help as it might be elevated in either condition. I think the bloody pleural fluid is due to malignant involvement of the pleura on that side and is of great diagnostic importance. I don't believe the organisms in the sputum are anything more than secondary invaders.

Dr. Wilson: What other important chronic pulmonary conditions have to be considered in the differential diagnosis?

Student Hook: Well, you have to consider mycotic infections of the lung and lymphosarcoma of the mediastinum. The latter is rather unlikely as it is rare and many of the supposed cases finally turn out to be carcinoma of the lung. I think that lung abscess, bronchiectasis and an unresolved pneumonia also have to be considered.

Dr. Wilson: How would you rule out a mycotic infection?

Student Hook: I would do so by examination of the sputum and since this patient had a quantity of sputum and there were 12 examinations, I think this possibility is pretty well eliminated.

Dr. Wilson: What about a lung abscess?

Student Hook: I don't believe he had an abscess in the true sense of the word although he undoubtedly had some bronchial obstruction and infection.

Dr. Wilson: Would you expect to find any enlarged glands on superficial examination in carcinoma of the lung?

Student Hook: The tracheo-bronchial glands would certainly be involved first and possibly supra-clavicular and axillary metastases might occur as a late manifestation.

Dr. Wilson: Would you expect the patient to have any clubbing of the fingers?

Student Hook: No, not necessarily. If this finding were present it would simply help substantiate the diagnosis of pulmonary pathology.

Dr. Wilson: Mr. Fouche, do you have any other ideas?

Student Fouche: I agree with Mr. Hook. As regards the diagnosis of tuberculosis, I feel that 12 examinations of the sputum should have revealed tubercle bacilli if they were present, particularly since the presence of elastic fibers indicate destruction of lung tissue. There are only a few other possibilities that might be mentioned. Sarcoma of the lung, which is so rare that I am not sure that it ever occurs. Hodgkin's in the mediastinal nodes must also be included, and then of course secondary metastases to the lung may have come from practically anywhere.

Dr. Wilson: Yes, that's true. What are the most common sites of primary tumors which metastasize to the lungs?

Student Fouche: Tumors of the prostate, bones and stomach are those that I recall at present.

Dr. Wilson: How would you differentiate between a primary and secondary malignancy of the lung?

Student Fouche: I would first of all carefully search for and attempt to rule out any other possible malignancy. I also thought that secondary lesions were usually quiet affairs and did not give such marked symptoms.

Dr. Wilson: What other examinations would you like to have?

Student Fouche: A rectal examination and X-ray of the chest.

Dr. Wilson: Do you think you can tell primary and secondary malignancies from X-ray?

Student Fouche: I couldn't.

Dr. Wilson: Well, perhaps Dr. Kalayjian can.

Dr. Kalayjian: (Demonstrating X-rays) — Unfortunately, I cannot be as definite about the diagnosis as these young men. It is also unfortunate that we didn't have a complete clinical story when the patient was sent to our department. The patient was sent to us with a diagnosis of tuberculosis. We didn't think he had tuberculosis, but some other type of chronic pulmonary infection, possibly mycotic, with a pleural effusion on the right. It is important to remember that in primary carcinoma of the lung one must expect to find almost anything in the chest. The picture here is certainly nothing like metastatic carcinoma.

Dr. Wilson: Mr. Hook, do you have anything else to say?

Student Hook: I don't think the roentgenographs look at all like secondary lesions and believe that pain and considerable sputum are unlikely symptoms in metastatic lesions.

Dr. Wilson: What are the locations of malignant tumors in the body that not infrequently give rise to metastases to the lungs?

Student Hook: I can't think of any others beside the ones, Mr. Fouche mentioned except carcinoma of the breast which is not likely in this case.

Dr. Wilson: What about carcinoma of stomach?

Student Hook: I was under the impression that it most frequently spread to the liver.

Dr. Wilson: Mr. Banov, do you think a simple malignant tumor of the lung can explain all the conditions here?

Student Banov: Yes, I think so and I concur in this diagnosis. In one reported series there were 9 cases between the ages of 21 and 30, so it is not an impossibility. I think the bilateral involvement makes a lung abscess unlikely, although I believe some infection is present such as is prone to occur in degenerating tumor tissue.

Dr. Wilson: I have seen a case in which tubercle bacilli were eventually found on the 36th examination, but agree that 12 examinations are usually enough. I think the bloody pleural fluid is the most important finding in this case and that a chest tap should have been performed sooner.

Dr. Kalayjian: I am disappointed that none of the students mentioned teratoma of the testicle and hypernephroma of the kidney as two of the most common malignancies that metastasize to the lungs.

Dr. Parker: It amazes me that everyone so glibly diagnoses carcinoma of the lung. Night sweats are certainly not the usual initial symptoms in this disease. Carcinoma close to the periphery of the lung might of course account for the delay in development of the cough and other obstructive symptoms.

Dr. Lynch (demonstrating lung specimens): It is carcinoma of the lung, but is rather difficult to demonstrate here and now. There was no intra-bronchial tumor found, but it is a type of bronchial carcinoma. One interesting thing is the multiple miliary seeding of both lung fields with tumor tissue. Invasion of the blood vessels by the tumor was a conspicuous finding with resultant thrombosis in large and small vessels. The invasion was very prolific and the shadow in the left lung was due chiefly to an infarct. There were, in addition, multiple infarcts in the kidneys and spleen, but particularly in the brain. Numerous small areas of softening and petechial hemorrhages were present in the brain, one vessel being plugged by tumor cells.

I don't think he died of infection, which often kills in carcinoma, but from thrombosis, embolism

and infarction and the resultant cerebral injury, illustrating that there is scarcely anything that a malignancy cannot do in any particular case.

There was axillary node involvement, perhaps

from the spread of carcinoma along fibrous adhesions. I would also like to add carcinoma of the liver to the list of malignancies that frequently metastasize to the lungs.

WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

LAURENS COUNTY MEDICAL AUXILIARY

The Auxiliary to the Laurens County Medical Society held its November meeting at the home of Mrs. H. R. Perkins. The President, Mrs. D. O. Rhame, Jr., of Clinton, presented the speaker for the afternoon, Mrs. Jennie E. Bolin, tri-county tuberculosis nurse, who spoke to the group regarding the extensive work being accomplished by the corps of workers in the Tuberculosis Division of the County Health Department. Her report was both interesting and instructive and her enthusiasm enlisted the members in a more active phase of the work of her department.

The minutes of the preceding meeting were read by the secretary, Mrs. Perkins. The discussion of old business included a final report of the sale of rose bushes and the addition to the treasury of the commission check derived from this sale sponsored by Mrs. John Garrett Hart of Laurens, as Chairman. New business included a discussion of plans for a bridge tournament held on December 6 in Laurens. Mrs. George Blalock of Clinton was general chairman of the tournament and Mrs. Jesse Teague and Mrs. J. F. Dusenberry, reservation chairmen. The money realized from the tournament was used for the Jane Todd Crawford Memorial Fund and for the Laurens County Tuberculosis Association.

After the business the hostess, assisted by Mrs. H. M. Rutledge and Mrs. R. H. Parks of Cross Hill served tempting refreshments.

ABBEVILLE COUNTY MEDICAL AUXILIARY

The Abbeville Unit of the Woman's Auxiliary met December 10, 1940, with Mrs. J. V. Tate at Calhoun Falls.

There were six members present. Mrs. J. W. Parker read a message from Mrs. Holcomb, President of the Auxiliary to the American Medical Association and Mrs. D. L. Bryson read a paper on Public Relations. During the business meeting it was decided that each member adopt some needy family and do something for them at Christmas.

Mrs. W. L. Pressly reported that the Jane Todd Crawford Memorial bed had been ordered and would be placed in the Abbeville Hospital upon its arrival.

Mrs. Tate served a delicious salad course with coffee from a beautifully appointed table using Christmas decorations.

The meeting adjourned to meet with Mrs. J. R. Power in March 1941.

Mrs. J. R. Power, Secretary.

PICKENS COUNTY MEDICAL AUXILIARY

On Friday, December 13, the Pickens County Medical Auxiliary met at the home of Mrs. J. W. Potts, Easley. The home was beautifully decorated with Christmas greens and a table was used in the dining room to receive the Christmas donations from the members for needy families in Six Mile. This is an annual custom which is rotated yearly between Pickens, Liberty, Six Mile and Easley.

The meeting was opened by the President, Mrs. P. E. Swords, Liberty, with ten of the fourteen members answering to roll call. Mrs. J. C. Pepper led the devotional, reading from Luke 2 through verse 14 and also told of "The Greatest Man who ever lived." This was followed by prayer.

Reports were heard from committees and a "pantry sale" was planned for the January meeting for the Jane Todd Crawford Memorial bed.

Mrs. N. C. Brackett had charge of the program and introduced Mrs. J. L. Valley and Mrs. Byrd Lewis, who gave readings by the Editor of Good Housekeeping entitled "Why Should We Celebrate Christmas in 1940," and "Christmas 1940." Mrs. Brackett gave "We have seen His Star and are Come."

After reciting the Club Woman's Creed the meeting adjourned and Mrs. Potts served a beautiful Christmas plate to her guests. Mrs. C. W. McKittrick was a visitor.

Ruth deS. Furman,
Publicity Chairman.

GREENVILLE COUNTY MEDICAL AUXILIARY

On December 9, Dr. Frank Howard Richardson of Black Mountain, N. C., pediatrician and author addressed members of the Medical Auxiliary at the home of Mrs. R. M. Pollitzer on Hillcrest Drive. Miss Miriam Sanders gave a group of musical numbers.

The President and one member from each federated club in the City were invited to be guests of the Auxiliary at this meeting. Assisting Mrs. Pollitzer were Mesdames A. C. Watson, I. S. Barksdale, W. H. Powe, O. E. Horger, Jr., and R. M. Dacus, Jr.

NEWS ITEMS

DR. JOHN STANLEY FATALLY INJURED IN WRECK

Dr. John G. Stanley, sixty-five, of Marion, was injured near Loris early January 6th, when the car in which he was riding collided with a truck. Dr. Stanley was taken to the Marion hospital and died shortly afterwards.

The Medical History Club of Charleston held its December meeting at the residence of Dr. John Townsend. A paper on Edward Jenner was presented by Dr. James O'Hear, who brought out some of the lesser known sides of the discoverer of vaccination.

Dr. J. Y. O'Daniel who has been director of the Marlboro county health department for the last five years, has filed his resignation. He will enter private practice in Ellijay, Ga.

The Southern Medical Association has voted to hold its annual fall meeting in St. Louis in 1941.

The Esdorn Hospital at Walterboro has recently received a gift of \$1,000 from the estate of Franklyn L. Hutton. The money is to be applied toward the additions planned for the hospital.

WILLIAM WALLACE ANDERSON

In an article in the *Bulletin of the History of Medicine* (Vol. 8, November, 1940-1941) Dr. Edgar Hume describes among the "Ornithologists of the United States Army Medical Corps," Wm. William Wallace Anderson, born in 1824, at Statesburg, and a graduate in medicine at the University of Pennsylvania. Working in the Pacific Railroad Surveys, he observed and collected many specimens of birds. Later, he became a surgeon in the Confederate Army, and eventually returned to an active life of practice in his old home in South Carolina.

Dr. William Austin Tripp, well known physician, died at his home in Anderson County, six o'clock, Saturday morning, December 21, age 74 years. He finished Emory University, Atlanta, Georgia, in 1892 and had practiced in Anderson County since that time. In 1914 he was elected member of the Board of Trustees of the South Carolina Medical College, Charleston, S. C., and served on the

Board until his death. For the last ten years he was Chairman of the Board. Dr. Tripp was interested not only in his profession but in every phase that was for the upbuilding of the county and state. He was a member of the first Highway Commission of Anderson County and also served on the Anderson County Selective Service Board during the World War and performed a great service to his county in that capacity.

He is survived by his widow and the following sons; Dr. C. M. Tripp; J. Robert Tripp; T. A. Tripp; Ralph Tripp; Harry Tripp; Bill Tripp; Jack Tripp and Peiculau Tripp; one sister, Mrs. H. B. Smith. Funeral services were held Sunday afternoon, December 22, at three o'clock at the home with interment in the family plot in the Fairview Methodist Church Cemetery.

Beginning this month the American Medical Association will publish a new periodical entitled "War Medicine" as a part of its contribution to the preparedness program. The editorial board of the publication will be the Committee on Information of the Division of Medical Sciences of the National Research Council. The official reports of the American Medical Association Committee on Medical Preparedness will appear in the new periodical as well as special considerations that are given to economic and social problems of the medical profession in relationship to the emergency. The new publication will appear as a bi-monthly magazine. The Board of Trustees of the A. M. A. which has authorized its publication has established a price of \$5 annually for the subscription.

Dr. Jennings Cleckley opened offices in Bamberg, S. C., January 4, to begin the practice of medicine. Dr. Cleckley is a native South Carolinian and graduated from the South Carolina Medical College at Charleston almost two

WANTED: Two extra good small towns with country practice for young doctors. Call or write Dr. C. A. Pinner, Peake, S. C.

years ago. Since then he served his internship in the Charity Hospital in New Orleans and from September, 1940 to January 4, 1941, was a Resident Physician in the Tri-County Hospital located in Orangeburg. He is the son of Mrs. Mary Cope Cleckley and the late Dr. J. J. Cleckley, whose life was given in line of duty during the influenza epidemic in 1918.

Dr. and Mrs. Arthur P. McElroy and family of Union motored down to Miami, Florida during the Christmas holidays. Dr. McElroy and daughter, Miss Agnes McElroy, went on to Cuba for a few more days of travel returning to Miami to join the family for the motor trip back to Union.

Dr. and Mrs. J. T. Davis of Walhalla are receiving the congratulations of friends on the birth of a son, Michael Knight, on Saturday, January 3, at St. Francis Hospital in Greenville.

Dr. J. Warren White of Greenville has been appointed Councilor from South Carolina to the Southern Medical Association. Dr. White succeeds Dr. Kenneth M. Lynch whose term of office expired during the meeting of the Southern Medical Association held in Louisville, Kentucky, November 10-14, 1940.

Dr. O. B. Mayer of Columbia was elected Chief of the Staff of Providence Hospital recently. Dr. R. B. Durham was elected Vice Chief and Dr. R. B. Josey, Secretary. Dr. Tom Pitts; Dr. F. E. Zemp and Dr. William Weston, Jr. are the Staff Committee.

Dr. James McBrearty and Dr. Jack Parker both of Greenville attended the Sugar Bowl game held in New Orleans recently.

The friends of Miss Sybil Lee of Lancaster and Columbia and Dr. Paul Eugene Payne of Columbia will be interested in hearing of their marriage on January 1. The ceremony was performed at the home of the bride's sister, Mrs. T. Olin Monts of Columbia in the presence of relatives and a few friends of the couple by Rev. S. K. Phillips, pastor of Arsenal Hill Presbyterian Church. After a wedding trip to Florida and Cuba, Dr. and

Mrs. Payne are at home at 1421 Fairview Drive, Columbia.

According to latest information the following doctors, officers and members of the Medical Reserve Corps, have been called to active duty: Maj. I. Schayer, Columbia; Lt. Robt. H. Crow, Cowpens; Capt. E. Finger, Marion; Lt. Y. M. Hyer, Chester; Lt. Daniel L. Smith, Jr., Spartanburg; Lt. Thaddeus A. Timmons, Pamplico; Lt. John K. Walsh, Florence; Maj. Harry F. Wilson, Columbia; Capt. W. W. Ball, Columbia.

Dr. Alfred F. Burnside, retiring President, entertained the members of the Columbia Medical Society at a smoker and buffet dinner December 9, 1940, preceding the annual meeting for the election of officers. It was a splendid innovation and reported to be a most enjoyable occasion.

MEETING OF KERSHAW COUNTY SOCIETY

Regular meeting of the Kershaw County Medical Society at Gus Wards' at 8:00 P. M., Nov. 13, 1940. Host: Dr. A. W. Humphries.

A motion was made by Dr. Brailsford and passed by those present that the Corresponding Secretary forward some of the minutes of our Society meeting to the Southern Medical Journal.

Dr. Blackmon made a motion that the F. S. A. terminate with the year 1940. This was seconded and passed.

Dr. F. E. Zemp was greeted and welcomed to the Society. With brief comments acknowledging his welcome, Dr. Zemp introduced Dr. J. M. Davis, our guest speaker for the evening.

Dr. Davis presented a very interesting and instructive paper on "Cystitis."

The first interesting point mentioned was the fact one may have cystitis without any urinary findings except a frequency of micturition. He stated it also was a condition that might be almost miraculously helped but not cured. It was mentioned that its etiology was unknown, there being a multiple list of possible causes.

As to Pathology, there is noted only fibrosis of the areolar tissue with secondary vascular congestion.

The diagnosis, it was said, is extremely easy, long duration of symptoms, frequency being the outstanding symptoms, diurnal and nocturnal. Pain is present and frequently suprapubic in location.

Cystoscopic examination in well defined cases shows the ulcer areas with fissuring.

In differential diagnosis the most confusing element is tuberculous cystitis. Carcinoma and radium burn are not easily confused if thought of.

As to treatment, there is no known cure, but methods of relief are offered. First form of treatment:

- (1) Distention of bladder under anesthetic.
- (2) Fulguration, but recurrence almost certain.
- (3) Small doses of neo-arsphenamine have been found somewhat valuable.

Second form of treatment used on extreme cases:

- (1) Resection—not recommended generally.
- (2) Section of sacral nerves—not entirely satisfactory.
- (3) Ureteral transplantation. Not too difficult to perform at present since sulfanilamide is used to combat infection. An important notation was placed that in cases where this procedure was carried out, the fallopian tubes should be tied.

In closing, Dr. Davis brought out the prevalence of this condition among the general female population and the importance of looking out for the condition.

In discussion Dr. West asked the significance of relief following transplantation of the ureters. Due to the uncertainty of etiology, etc., this could not be completely explained.

Dr. Brunson briefly gave a case history of relief by pyridium in a case resembling this cystitis.

Dr. Brunson then presented a paper on "Herpes Zoster as treated with sodium iodide." The characteristics of the lesions were mentioned. Its etiology covered multiple possibilities, a confession as to its uncertainty as pertains to causative agents.

In the symptoms, it was mentioned that in majority of cases pain is the outstanding symptom, sometimes prohibiting any friction of clothing.

In diagnosis, it was brought out that before the rash appears it may be difficult and even confused with angina.

Treatment. First, relief of pain is prime factor.

(1) Use of diphtheria antitoxin.

(2) Use of thiamin chloride.

(3) Use of pituitrin.

(4) Use of sodium iodide intravenously—two grams every other day. Never more than four doses were necessary in a series observed.

Three case reports were given, indicating satisfactory results.

Drs. Zemp and Shaw commented on other forms of treatment.

There being no further business the meeting adjourned.

F. G. SHAW, Secretary.

NEW HOSPITALS TO BE BUILT NEAR CHARLESTON

In line with the general movement towards preparedness, two new hospitals are to be erected near Charleston.

The new Naval Hospital at the Navy Yard, which is to have a capacity of 200 beds, is already under construction. It is to be of cinder block material with terraza floors and is of permanent construction, with provision for expansion if necessary. The old hospital building will probably continue in use as a dispensary for the Navy Yard.

Plans have been made for the construction of an Army Hospital on the Ashley River, about eight miles from Charleston. The building is to begin soon and it is thought that the hospital will be completed within three months. This will be a general hospital which will serve the Carolinas, Georgia and possibly other areas and is to have 1,000 beds, with provision for expansion to 2,000 or more if necessity arises. It will be of wooden construction with concrete foundation and metal roof and will cost probably in the neighborhood of \$2,000,000. The general plan is that of a one-story building covering considerable space. It

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" " "

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is believed that the services of 100 doctors, 200 nurses and miscellaneous help, amounting to a total of 750 people, will be required to staff this hospital.

In addition to these facilities, there is a small hospital at the U. S. Quarantine Station on James Island which was constructed several years ago, but has never been put into use.

Inasmuch as the civilian hospitals of Charleston are generally in an over-crowded condition, the need for these buildings is very evident and in an emergency it will probably be necessary to do considerable expansion.

Dr. Thomas Parren, Surgeon General of the United States Public Health Service, says in the Southern Medical Journal of January, 1941:

"From the newer scientific knowledge, it has become apparent that underlying all considerations of disease prevention and cure is the vitally important matter of proper nutrition. We are beginning to learn how to feed for fitness. We are beginning to learn that many persons without clinical evidence of diseases are incompetent for the nation's need and inadequate to meet their own problems because of various forms of malnutrition."

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of the

South Carolina Medical Association

VOLUME XXXVII

February, 1941

NUMBER 2

Cocaine Poisoning Treated With Morphine--Case Report

NORMAN O. EADDY, M. D., SUMTER, S. C.

A white, male, married, American, gentle, 18 year old farmer, weighing about 145 pounds, was seen in 1935 complaining of repeated sore throats, enlarged tonsils, and recurrently painful joints. The enlarged tonsils dated from childhood, attacks of sore throat had recurred for years, and the attacks of pain in the joints, especially the knees, had been occurring for a year. Past illnesses were not relevant except for repeated attacks of malarial fever. Syphilis and gonorrhea were denied.

Physical examination revealed a healthy looking young man with red anterior pillars, enlarged tonsils, mild cervical adenitis, and some questionable early arthritic changes.

Twelve grains of cocaine hydrochloride in sterile aqueous solution were injected about the tonsils. (In making the solution strong cocaine tablets had been mistaken for weak novocain tablets.) The plunger of the syringe was retracted before each bit of injection to insure that the solution did not directly enter a blood vessel. No preoperative medication was given.

About 3 minutes after beginning the injection—just as it was being completed—the patient became uneasy, restless, pale, and rather nervous. He asked for his mother, grew rapidly alarmed, and developed a feeling of impending disaster, stating he was surely dying. This unusual reaction prompted a check of the medicine used and the error was then de-

tected. Realizing this was an enormous dose of cocaine and believing it would surely prove fatal, the operator, his nurse, and a second physician who arrived in a few minutes attempted to note the patients reactions. The pupils had dilated, the pallor become marked, and a profuse cold sweat developed although the skin was hot to the touch. The fright and sense of impending death became rapidly extreme in spite of attempted reassurances. The arm and leg muscles began to contract and an excited form of stupor developed which gradually deepened into complete coma accompanied by spastic contraction of the arms and forearms. The respiration was becoming rapid and shallow and the pulse rapid.

Fifteen minutes after beginning the injection the patient was in deep coma, the jaws clamped tightly shut, the arms markedly flexed, hands tightly shut, and the head drawn slightly back. Respiratory movements were not visible, and no heart sounds were audible. The pulse was only questionably palpable (the last fairly accurate count being 190 per minute), sweating was profuse and cold, the skin hot (as though the temperature was about 104 F., though no thermometer was used), and pallor extreme. Apparently the patient was dying.

Adrenalin, caffeine sodium benzoate, atropine, strychnine, etc., were rejected because they were stimulants and the patient seemed in a spastic paralysis from stimulation already, the respiration having been completely arrested.

No general inhalation anesthetic was tried. It could have been used only by artificial respiration—which, by the way, was continually given.

Twenty-five minutes after the cocaine injection was begun 1/4 grain morphine sulphate was given intravenously. No improvement was evident. A second 1/4 grain was similarly given two minutes after the first. This, too, was without apparent immediate result. Two minutes after the second, a third 1/4 grain was started intravenously, with close watching of the pupil meanwhile. When about half of this third 1/4 grain had been injected the pupils began to contract and rapidly assumed pinpoint size. The balance of the third 1/4 grain was not given.

In slightly less than five additional minutes, the patient was relaxed, breathing normally, pulse normal in rhythm and feel except slightly fast, the patient was conscious, sitting up, and discussing his experience. The pallor, cold sweat, hot feel of the skin, and sense of fear had disappeared. The patient was slightly

drowsy. Two hours later he seemed quite all right and was sleeping lightly and quietly.

The following morning the patient had a chill followed by high fever—a typical malarial attack—which recurred two days later. Quinine was started following the first chill and fever and he had only the two attacks.

At present, over three years later, the patient shows no after effects.

Comment: I know of one person who, over twenty years ago, as a baby, ate an indefinite number of morphine tablets. The country doctor who was called gave the baby some cocaine hypodermically. I do not know how much. The baby was rapidly restored from deep coma, with arrested respiration, to an apparently normal condition.

I suggest the use of intravenous morphine solutions in cocaine poisoning, using whatever amount is necessary to contract the pupils. Whether cocaine intravenously is logical in morphine poisoning I have no idea but I should be inclined to use the cocaine hypodermically.

Uterine and Ovarian Tumors Complicating Pregnancy^{*}

ROBERT E. SEIBELS, M. D., F. A. C. S., COLUMBIA, S. C.

In the discussion of this topic, we will restrict ourselves to a consideration of the diagnosis and treatment of non-malignant tumors of ovarian and uterine origin, giving rise to symptoms during pregnancy, the delivery and the puerperium.

According to reports of various observers, with which our experience agrees, fibromyomas are present in about one percent of all pregnancies. Due to the increased success which has been the result of the treatment of sterility, pregnancies in older women are becoming increasingly frequent and as fibromyomas are most commonly seen in the third and fourth decade, we may confidently expect

a greater number of pregnancies complicated by these tumors than was formerly observed. It was once held that these tumors were the cause of sterility but the consensus of opinion now leans to the idea that they are more likely to be the result of failure of full physiological uterine function plus probably an endocrine imbalance.

The location of the tumor plays quite a part in our attitude to it: the sub-mucous variety being associated with mal-development of the placenta and various placental crises, frequently causing abortion, premature labor or premature separation of the placenta. That is, provided that the sterility so frequently encountered with this type has not prevented the pregnancy.

^{*}Read before Columbia Medical Society, Columbia, S. C., October 14, 1940.

The intramural type may be relatively unimportant as it is without symptomatology and if not located in the lower uterine segment causes no difficulty at delivery and shrinks with the involution of the uterus. The sub-peritoneal type is the least important as a rule unless it is situated low enough down to cause mechanical obstruction at delivery or has a sufficiently long pedicle to drop down in the pelvis and deflect engagement. It is interesting to note, contrary to our expectation, that the necessity for manual removal of the placenta is apparently not increased by the presence of fibroids. Neither are fetal anomalies more frequent in the presence of fibroid and this is logical inasmuch as these represent errors in development of the embryo rather than response to environmental stimulation.

While we have noted that sterility is more frequently an apparent cause of fibromyoma than a result, once a tendency to develop fibroids has manifested itself an intervening pregnancy does not preclude their further appearance. A patient is reported with a myomectomy in 1924, another in 1926, a normal delivery in 1932, and a fibroid obstructing delivery in 1936 requiring a Caesarean section and hysterectomy.

The tumors of ovarian origin may be any of those commonly encountered in the pelvis: in this connection, it is curious to note that while ovarian tumors are more than twice as common as fibromyomata in general, they are rather rarely found in pregnancy, and this suggests an etiological relationship between ovarian masses and sterility. While it is occasionally thought that an ovarian cyst enlarges with a pregnancy it is more probable that its emergence from the pelvis with the growing uterus has simply brought it up to where it could be more readily palpated and both patient and physician are startled by the sudden appearance of a good sized mass which was not noticeable a few weeks ago. We have had several opportunities to keep cysts under observation both before, during, and after delivery and no change in their diameters has been noted.

DIAGNOSIS

In the first trimester.

In the first few weeks of pregnancy the diagnosis of an associated pelvic tumor may be one of our most difficult problems. Occasionally a cyst three to four inches in diameter on one ovary can be raised out of the pelvis and the pregnant uterus may be palpated as a separate organ, but this is unusual and must not fill the observer with too much self-confidence in his diagnostic ability when it occurs. Such a cyst may be bound down in the pelvis and mask the pregnancy so that if there has been a history of bleeding at more or less the usual menstrual period the pregnancy may not be suspected until a routine curettage embarrasses the operator with a mass of decidual tissue or the abdomen is opened and the pregnancy found.

Happily, those fibrous tumors of the uterus which are most apt to give serious trouble are those most readily found at a careful examination. In this connection one should remember that fibroids rarely give rise to amenorrhea, so that if there is a history of missing one or two periods, even though we know from previous examinations that fibroids are present it is well to be doubly sure we are not dealing with an associated pregnancy. One should be guarded particularly in the diagnosis of either fibroid or ovarian tumor in the presence of regular menstrual periods. Recall that the corpus luteum of pregnancy may occasionally be of fairly large size and if the ovary is riding high it may readily be palpated and lead the examiner astray: the other symptoms and signs of pregnancy should be present and I would call your attention to a sign, not mentioned in the accessible literature, which I have found to be very helpful.

As you recall one source of the blood supply of the uterus reaches the lower portion of this organ through paired uterine arteries which send branches across the cervix and many branches upward in the anterior uterine wall. With the tremendous increase in the uterine circulation coincident with pregnancy and the frequent anastomosis of these vessels an arterial pulsation is easily palpated in the lower uterine segment just above the internal os.

In a series of nearly 200 patients I have found quite noticeable pulsation of these vessels demonstrable as early as the sixth week of pregnancy and have not found this pulsation under any other condition. I would not promise you that it is unfailing but I suggest that you seek this sign, for if it is present, pregnancy is certainly to be considered.

Be certain to have the bladder emptied for the examination of the pelvis and, to be very sure, catheterize, as many young patients who fear pregnancy may have a retention and a partially filled bladder may mask your physical findings if it does not give rise to greater embarrassment. In a difficult case the Trendelenburg position often is of great value as by this manoeuver an ovarian cyst can be made to float out of the pelvis and be readily palpated as a separate entity.

In the second trimester.

This is the period when tumors should be most readily diagnosed and with the least trouble. Ovarian cysts are lifted up out of the pelvis unless they are densely adherent, in which case they have probably given rise to symptoms long before.

Fibroid tumors become easily palpable as a rule and sometimes may actually be seen. Those low on the posterior wall are most apt to be missed as one does not ordinarily make vaginal examination during the middle three months. Occasionally a patient is seen with a large tumor about the size of a six months pregnancy well in the midline which to family and worried physician may surely be a pregnancy: we have encountered two such in which the unfortunate unmarried patients admitted exposure about the time when pregnancy was estimated to have begun. Both patients had nausea, one had enlargement of the breasts with secretion and there was considerable social as well as medical excitement. The catheter cured one and the removal of an ovarian cyst of gallon size soothed the apprehensions of the other.

Pregnancy in an undeveloped horn may simulate a tumor with a twisted pedicle, or a tumor with a twisted pedicle on a pregnant uterus may masquerade as an ectopic, especially if there is an associated threatened abortion

and irregular bleeding. Soft degenerating fibroids may present a very conflicting picture and be confused with pregnancy (and vice-versa) in either of the two trimesters. The abdomen has been opened by conservative surgeons thinking one had to deal with a necrosing fibroid and indeed, after the abdomen is opened there may be considerable difficulty in determining whether it is a pregnancy or a fibroid. DeLee councils under such circumstances, before performing a hysterectomy that the uterus should be opened at the fundus near the median line layer by layer and if found to be pregnant it may be closed with relative impunity. The presence of a corpus luteum is a diagnostic aid when found and should be sought.

Hydatid cysts are very confusing in both the first and second trimesters but in this case the uterus is invariably enlarged out of proportion to the duration of the supposed pregnancy, and both ovaries invariably contain large lutein cysts which are pathognomonic.

The third trimester.

Here one may be considerably embarrassed if at the first examination we have been perfectly certain of pregnancy and no further pelvic examinations have been made. A low fibroid or a good sized dermoid and even a large broad ligament abscess have been discovered preventing engagement or causing malpresentation and their presence hitherto has not been suspected.

Premature separation, accompanied by a large hemorrhage behind the placenta has caused us trouble in differentiating from an intramural fibroid and occasionally we have found both, as the tumor may cause placental separation. Even after delivery fibroid tumors may give rise to uncertainty in diagnosis. DeLee quotes an experience where six eminent gynecologists had agreed that there was a twin but the obstetrician held out as the twin would not deliver. An enlarged fibroid in the fundus was removed.

TREATMENT

Individualization of the patient and refraining from making a rule about treatment should be our guide. When special circumstance

warranted it, we have had several patients go through successive labors with both subperitoneal fibroids and readily palpable ovarian cysts. Any tumor in any woman, regardless of its location is probably better out than in; but some of these can be left alone and managed carefully without regret.

Intramural fibroids may be severely disturbed in their blood supply by displacement of the surrounding uterine wall during labor and may go on to necrosis and gangrene with dangerous results, so that these tumors urge myomectomy *before* pregnancy when possible.

The sub-mucous variety are prone to infection from devitalization especially after abortion and present a difficult problem in treatment. In their presence extraordinary care should be exercised in emptying the uterus and the maintenance of drainage, and their removal is associated with great danger of peritoneal contamination. The association of premature labor with the sub-mucous and posterior wall tumors is in argument for their prompt removal when feasible but conservative myomectomy rather than hysterectomy is to be recommended. Large tumors which are readily movable may safely be pushed up out of the way of the presenting part and delivery effected around them if satisfactory conditions for operative intervention are not present.

In the neglected case with an impacted presenting part and an impacted tumor the abdomen may be opened by the surgeon and the tumor lifted up and then an assistant may be able to deliver from below when it is undesirable to do a section or hysterectomy on account of infection. The safe period for operative removal of ovarian tumors is from four to five months and this time should be chosen for the operation if possible. We have had the occasion to remove two ovarian tumors and one fibroid during the seventh month in the past year and these were followed by normal delivery at term. In none of them was there a threat of premature labor.

Ovarian cysts may be dealt with surgically in the first trimester if the symptoms warrant without emptying the uterus; but if the corpus luteum of pregnancy has been damaged it should be removed, as the pregnancy may con-

tinue without it (aided by the parenteral use of progestin) but it will not continue if the corpus luteum is damaged prior to the fourth month.

During the first trimester, operative interference with fibroids is usually associated with abortion and it is safer in the intramural and sub-mucous type to empty the uterus at the same time as the myomectomy is done and through the same uterine incision.

An exception in our experience may be quoted in the case of an elderly schoolteacher who had been married many years without a pregnancy and we feared for the future child-bearing. A two inch intramural fibroid was removed at four months and the pregnancy continued undisturbed.

Tumors with long pedicles, especially ovarian cysts, should be removed before labor when possible to prevent sloughing or bursting of the cyst. Rupture of a dermoid cyst must be carefully guarded against as the irritating nature of its contents may cause a serious peritonitis.

The majority of fibroids can be left alone until delivery when the safest procedure is an elective Caesarean section with myomectomy. The multiplicity of these tumors need not discourage conservation of the uterus as we have found that many small tumors may be removed and another pregnancy gone through without rupture of the uterus or necessarily the development of further tumors.

The tendency to anemia and postpartum hemorrhage in the presence of sub-mucous and intramural fibroids should be borne in mind and iron therapy be instituted early in the pregnancy and a donor for transfusion should always be secured before delivery is attempted.

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Follicular Naso-Pharyngitis

A FREQUENT CAUSE OF FEVER OF UNDETERMINED ORIGIN

J. W. JERVEY, JR., M. D., GREENVILLE, S. C.

You are called to see a patient at home or he comes walking, or more accurately dragging into your office, face rather pale, woe-begone expression, hardly lifting one foot above the other, obviously ill. Perhaps in a flat sort of voice reminiscent of the tone quality found in peritonsillar abscess he says, "Doctor, I've been sick a couple of days. Began with a dry feeling in my throat. Now my ears and jaws ache and it hurts to swallow. I have a terrific headache, too, and pain down my back. I believe I have the flu."

You look him over in what you believe to be a careful and thorough manner. His temperature is 101 F. or more, or it may be subnormal. His urine is negative. His blood pressure is satisfactory. His heart and lungs are clear. His abdomen is soft, relaxed, and there is no tenderness. His throat, carefully examined with tongue depressor, and perhaps with pressure on the tonsils, if he is lucky enough to have any, shows absolutely no pathologic change.

Because of the back pain, the headache, the fever, and the normal physical findings, you put down on your record in space reserved for diagnosis, "Influenza" or "La Grippe," or "Fever of undetermined origin." But, gentlemen, that is not what he has.

If you had done a white count you would have found 10,000 to 18,000 cells and a large percentage of polymorphonuclears. Above all, and most important you should have examined the nasopharynx either by direct inspection with a retractor, or with a post nasal mirror. If you had done so, you would have been a typical follicular nasopharyngitis, an inflammatory disease involving the lymphoid tissue of the nasopharynx in exactly the same way that the tonsil is involved in acute follicular tonsillitis. In this condition the lymphoid nodules in the adenoid space become hypertrophied and there are white patches on their tops. Recognition is easy and certain with the

mirror examination which anyone can master with a small amount of practice.

There is little in the literature of the past ten years and no adequate article was found in some eighteen textbooks consulted on this quite common clinical entity. The older writers seem however to have been more conversant with it than do the more modern ones, many of whom do not discuss it at all.

Not a few, but literally thousands of these cases annually go unrecognized, and are treated as "flu." Fortunately the condition is selflimited. All cases get well spontaneously. Gentlemen, this disease and the sufferers from it (and believe me they suffer as I well know from personal experience) deserve more careful diagnosis and more adequate care than they are getting today.

Cultures from these throats usually yield a streptococcus, but staphylococcus may be found in pure culture, and mixed cultures are not infrequent. The exact cause of the disease is not known. It may be accompanied by rhinitis or pharyngitis, although this is not always true, and when we know the causes of acute follicular tonsillitis, acute pharyngitis and acute rhinitis, we will also know the causes of acute follicular or pseudomembranous nasopharyngitis. Changes in meteorological conditions are said to be a factor in its origin as are also exposure and dust. One of the older and abler writers refers very aptly to dust as "the toy of the winds and the torment of catarrh—playing hide and seek with the cilia of the nose." General physical debility plays an exceedingly important part. Recurrent attacks are the rule and I strongly suspect the presence of a low grade sinus disease in all such cases. Although it is natural to expect otherwise, middle ear abscess only rarely occurs.

Proper treatment is the expeditious use of one of the sulfonamids. Preference probably belongs to neo-prontosil which has been found virtually non-toxic and very efficient in fairly small doses. Ten grains every four hours for

the adult is enough in these cases. Larger doses will not be more effective. The dose is reduced as improvement occurs. The diet is light, fluids are forced and sugar and wheat are forbidden as they tend to promote congestion of the mucosa and probably retard resolution. Although recovery will take place naturally in about ten days, half or more of this time can be saved by the proper treatment, which should be instituted early. Local applications cannot possibly be thorough, are definitely ineffective in my experience, and can positively be harmful as the tissues are highly sensitive and easily injured. A case is occasionally intractable and here it may be desirable to change over to sulfathiazole, especially where the culture from the throat yields a pure staphylococcus. Also in such cases local treatment with silver nitrate or tincture of iodine may be of value after the more acute stage has passed. An

exception to the omission, in general, of all local treatment is the use of "P and B base iodine" in the nose to relieve excessive drying which is frequently most distressing. Codein is often needed for pain.

Gentlemen, I beg of you, look, and see, and believe in the post-nasal mirror.

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Ubiquitous Influenza

LEON BANOV, M. D., COUNTY HEALTH OFFICER, CHARLESTON, S. C.

While influenza is no longer the obscure mystery that it was in years gone by, there are still many angles of the disease that are not yet fully understood.

The epidemiologist for instance, asks why is it that influenza should apparently smolder from time to time, with frequent epidemics in localized areas, to flare up every few decades and sweep suddenly and completely over the entire civilized world. The answer to this question has not yet been found.

Influenza is by no means a new disease. Ever since the fifth century, Europe has been visited from time to time by widespread pandemics, and several of the pestilences mentioned in the Bible might well have been influenzal in origin, according to some authorities.

The Italians in the 17th Century gave it its present name, supposing that it owed its origin to some occult influence of the stars.

The term La Grippe, frequently used in the past, is supposed to come from the Polish "Crypka" meaning "hoarse" or "hoarseness."

It might also have come from the French "gripper" which means "to seize."

The Germans have called it the "blitz-katarrh," and the 1918 pandemic, was spoken of as "Spanish Influenza" because it affected Spain before the other European countries.

Between pandemics, influenza seems to be widely prevalent as a mild endemic disease, flaring up every few years to epidemic proportions, when it will affect a large number of people in a few more or less localized areas. Every few decades, however, influenza will assume pandemic proportions and will sweep over the entire civilized world, following the usual routes of human travel; and the rate of progress of the pandemic coincides identically with the speed with which men travel.

Thus, the 1830-31 pandemic of influenza which appeared in Moscow took nearly three months to reach St. Petersburg (now Leningrad), five months to reach Warsaw and seven months to reach Germany. America did not get the outbreak until about the eleventh month.

The 1889-90 pandemic began in Russia and

reached Berlin the second month, and the United States by the end of the third month; while the 1918 pandemic attacked Spain and reached the eastern part of the United States in the same month. By the second month, all of North and South America were affected, as were all of Europe, all of Africa, India, China, Korea, New Zealand and Madagascar.

A widespread flare up of influenza is now being felt throughout the United States—especially along the Atlantic seaboard. In Charleston, where the writer has had an opportunity to observe the course of the present outbreak, more than 3500 cases of influenza were reported to the Health Department, and even a most cursory survey reveals the fact that there were at least four times that number of cases unreported, and having no physician.

The sudden explosive character of this present outbreak is reminiscent of the 1918 pandemic, although the present cases seem very mild by comparison. Very few secondary pneumonias have so far been reported.

With millions of men mobilized in Europe today, the stage seems to be set for another great pandemic. When we realize that the 1918 pandemic affected nearly five hundred million

persons and caused the death of between fifteen and twenty million, we are heartened by the thought that we do know a little more about influenza that we did in 1918.

At that time, we were not even sure as to the etiological agent. Today we are reasonably certain that influenza is caused by a virus of several strains. At least one of these strains has already been isolated with the aid of a laboratory animal, and a protective vaccine against influenza has recently been announced. Although this vaccine is still in the experimental stage, it shows considerable promise.

Influenza may, like the poor, be with us always. But when we note the encouraging beginning that has already been made in the laboratories with this disease, and when we evaluate our marked progress in the treatment of pneumonia—our most serious of the post-influenzal complications,—we have a right to feel that in the years to come, influenza may continue as a nuisance disease; but as a killer, it will surely go the way of cholera, bubonic plague, yellow fever, and the other diseases that have been vanquished by scientific medicine.

NEWS ITEMS

The following prominent doctors have accepted invitations to address the Southeastern Surgical Congress at its meeting in Richmond, March 10th, 11th and 12th:

ALA. Dr. J. R. Garber, Dr. J. O. Morgan.
 FLA. Dr. R. B. McIver.
 GA. Dr. E. F. Fincher, Dr. W. G. Hamm, Dr. V. P. Sydenstricker, Dr. E. A. Wilcox.
 ILL. Dr. F. H. Falls.
 KY. Dr. I. Abell, Dr. R. A. Griswold, Dr. J. D. Hancock, Dr. C. C. Howard, Dr. F. W. Rankin.
 LA. Dr. C. G. Collins, Dr. A. B. Longacre.
 MD. Dr. C. F. Geschickter.
 MASS. Dr. F. H. Lahey.
 MICH. Dr. E. S. Gurdjian.
 MINN. Dr. G. J. Thompson.
 MISS. Dr. H. R. Shands, Dr. M. M. Snelling.
 N. Y. Dr. B. L. Coley.
 N. C. Dr. P. C. Hardin, Dr. B. C. Willis.
 OHIO. Dr. F. M. Douglas.

PENN. Dr. W. L. Estes, Jr., Dr. T. S. Fay, Dr. G. Tucker.

S. C. Dr. F. P. Coleman.

TENN. Dr. W. C. Campbell, Dr. E. L. Rippey, Dr. R. L. Sanders.

TEX. Dr. A. I. Folsom, Dr. W. G. Stuck.

VA. Dr. J. M. Emmett, Dr. W. B. Martin, Dr. W. L. Peple.

WASH. Dr. B. T. King.

W. VA. Dr. H. C. Myers, Dr. J. C. Pickett.

Dr. David T. Smith, Professor of Bacteriology and clinical Medicine at Duke University Medical School, addressed the Charleston County Medical Society on "Recent Advances in Bacteriology of Value to the Clinician," on January 28th.

At the same meeting, Dr. Edward F. Parker presented a paper on "The Late Results in Acute Perforated Peptic Ulcer Treated by Simple Closure with Particular Reference to Multiple Ulcer."

THE JOURNAL

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OFFICE OF PUBLICATION

Medical Building ----- Seneca, S. C.
 Subscription Price ----- \$3.00 Per Year

FEBRUARY, 1941

INFLUENZA VACCINE

The tremendous number of cases of influenza in South Carolina and in other States has renewed interest in the question of vaccination against the disease. Workers at the Rockefeller Foundation Laboratory have found certain very interesting facts in regard to the prevention of influenza in ferrets. Their findings center around the relation of the virus of canine distemper and the virus of human influenza. Definite increase in immunity can be produced in humans. The exact mechanism of protection has not been determined, nor has investigation been carried far enough to make extended trial of this method feasible. While the promise of the work is very definite, it seems unlikely that clinical application will be possible for some time to come.

The 12th annual session of the Southeastern Surgical Congress will be held at Richmond, Virginia, March 10th, 11th and 12th. The program includes numerous clinics and lectures covering every branch of surgery, and given by

men outstanding in their specialties. These meetings have become increasingly valuable in the past years and an excellent program is offered by the committee in charge. South Carolina doctors have attended these sessions in considerable numbers and it is expected that the state will be well represented this year.

Among the speakers, Dr. F. P. Coleman of Columbia will represent this state. A complete list of speakers is found elsewhere in this Journal.

SCIENTIFIC COMMITTEE CALLS FOR PAPERS

Dr. Jack Jervey of Greenville asks that titles and papers be sent in as soon as possible for consideration by the Scientific Committee.

WANTED: Young doctor to take charge of my private country practice for six weeks or two months while doing post graduate work. Dr. C. A. Pinner, Peake, S. C.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

December 13, 1940

Case of Dr. W. H. Kelley

ABSTRACT NO. 428 (70111)

Student D. P. Reese (presenting):

History: A 34 year old negro laborer admitted on 8-15-40 with chief complaint of "coughing on getting up suddenly and choking feeling in throat." Patient was first seen in clinic with history of frequent coughs for 6-7 months and wheezing for 2-3 months. Cough was productive of frothy, milky sputum; not blood tinged. He was sent to Pinehaven Tuberculosis Hospital on May 9, 1940, at which time he had some shortness of breath. Has occasional night sweats. No fever, but stated that his head felt hot some times. Appetite good. Complained of "running eyes and nose like a fresh cold." Had some fluttering of his heart at onset of illness but none at the time of admission.

Past History: Gonorrhea in 1920. Took 5 "shots" two years ago. Worked at Charleston Asbestos Co. for 6 years around 1919.

Examination: T—98.2 P—120 R—24 BP—105/85 Wt.—120 (Ave. Wt.—145). Revealed a well developed but malnourished, slightly dyspneic, non-toxic individual. Skin moist. Mucosa pale. Pupils normal. Ears neg. Perforated nasal septum. Tongue protruded in midline without tremor; wavy brown spots on it. Teeth showed some cavities. Tonsils slightly enlarged and inflamed with a few scattered pustules. Cervical nodes palpable, painless. Neck not remarkable. Chest symmetrical with good, equal expansion. Moist rales at both lung bases and at left apex. Diminished resonance and vocal fremitus over both sides posteriorly. Mediastinum widened one finger breadth to right and left. PMI in 5th ICS 9cm. from midline. Blowing systolic murmur at apex; rhythm regular. Liver and spleen not palpable. No fluid. Old herniorrhaphy scar. Reflexes normal. Wasting and malnutrition of arms and legs but no weakness or sensory disturbances.

Laboratory:

Urinalysis essentially negative.

Wassermann and Kline positive.

Sputum Neg. for tubercle bacilli (7 X).

Blood culture 9-21-40 Neg.

Blood 8-15-40 9-3-40

Hb. 12 gms.

RBC. 4.5

WBC. 4,500 14,150

Polys 58%

Lymphs 38%

Course: Temp. around 102 from 9-2 to 9-5 and again elevated from 9-16 to 9-19. Skin always wet with sweat. Complained of something in his throat interfering with respiration on 9-9. By 9-19 respirations ranged from 32 to 44 and breathing was entirely abdominal. Pulse became weak and rapid and respirations so labored that surgical consultation was requested and tracheotomy suggested but not thought advisable. Expired on 9-22-40 at 11:50 A. M.

Doctor W. A. Smith (Conducting): I wish to add some other pertinent facts that are not included in the protocol, and to point out that when I first saw the clinical abstract I didn't recognize the patient at all, and I knew him very well.

He was in a hospital in Baltimore in 1938 with pain in his leg and received a few "shots." He noted shortly thereafter that he was short of breath, but was able to go to Florida for the harvest. He then returned to Charleston and was seen in chest clinic where a diagnosis of tuberculosis was made. His chest expansion was very poor and there were pulsations of the vessels in his neck. It was also noted that his larynx moved downward with each inspiration. Numerous rales were present over the entire chest, being most marked in the upper portions of the lungs. Respirations were chiefly abdominal with diminished resonance and breath sounds throughout both lung fields and inspiratory and expiratory rales. The mediastinum was markedly widened. The trachea was deviated to the right. There was a short systolic blow at the apex. Later on during his illness the neck veins became distended.

Mr. Scurry will you suggest some possible diagnoses?

Student Scurry: Before hazarding a diagnosis I would like to know a little more about the type of work that the patient did in the Asbestos Plant.

Student Reese: He worked in a very dusty atmosphere, 6 days a week, until 1926. He also was employed in a very dusty atmosphere in Florida.

Doctor Smith: Mr. Rosenberg, what is asbestosis and do you think you can explain all this man's physical findings on this alone?

Student Rosenberg: Asbestosis is one of the pneumoconioses,—a fibrosis of the lungs caused by the inhalation of asbestos particles. I am afraid that this single disease entity will not explain the marked widening of the mediastinum, deviation of the trachea, and the peculiar descent of the larynx on inspiration. Carcinoma of the lung superimposed on asbestosis has been reported in this section and should be considered in this case. Some type of

malignancy of the mediastinal lymph nodes would also help to explain the other findings.

Doctor Smith: Mr. Ross, what other things would you consider?

Student Ross: The positive Wassermann coupled with the other findings makes an aortic aneurysm a good possibility. Lymphosarcoma and intrathoracic thyroid may also be mentioned in the differential diagnosis.

Doctor Smith: Miss Sampson, do you have any other suggestions?

Student Sampson: In view of the anti-luetic therapy and the positive serology, syphilis of the lung is not altogether unlikely, but very difficult to prove.

Student Smith: All these other possibilities have been mentioned, but what about tuberculosis? This appears to me to be worthy of definite consideration. While running through the list of possibilities Hodgkin's, dermoid cyst of mediastinum, and fungus infection of the lungs will help make a longer list from which to choose.

Doctor Smith: Here are the X-ray films of the chest taken on May 10th. Mr. Steinberg, will you interpret them for us?

Student Steinberg: Both lung fields show a diffuse fuzzy infiltration. The upper portion of the mediastinum appears widened and the trachea is either pushed or pulled far over to the right. There is irregularity of the lung margins in the sulci and about the bases. There is also widening of the heart shadow.

Doctor Smith: Miss Sampson, can you substantiate syphilis of the lung or rule it out.

Student Sampson: I'm afraid not. It was merely a suggestion and is very difficult to diagnose before death. Response to syphilitic therapy would certainly be a help, however.

Doctor Smith: Well, Mr. Ross, after seeing the X-rays what do you have to say about your suggestions?

Student Ross: First of all I wish to say that I don't believe it was a substernal thyroid. I'm not sure just what the radiographic appearance of such a condition is, except perhaps there is a more triangular shadow, and I do not believe these films will bear this out. Neither do I believe it was an aortic aneurysm. The patient had no tracheal tug which one would expect with an aneurysm in this location. On the other hand an aneurysm could produce the cough and sputum from pressure on the bronchi with the development of bronchiectasis.

Doctor Smith: Mr. Smith what do you think about tuberculosis?

Student Smith: I still can't rule it out. A chronic infection, sputum, cough, low-grade temperature—all point towards tuberculosis. I would like to know how the sputum was examined.

Doctor Smith: He had an abundance of sputum and seven examinations might rule out tuberculosis.

So far as I know no concentrated specimens were examined. How do you explain the widening of the mediastinum?

Student Smith: Enlarged glands either from tuberculous or some other inflammatory or neoplastic growth might account for it. It is not inconceivable, however, that a markedly thickened pleura and fibrous tissue proliferation in the mediastinum could be responsible. One cannot dispose of a mediastinal malignancy either. Some such growths have a tendency to infiltrate and spread very widely and these radiographs do not rule out the existence of such a process here. Carcinoma of the lung does not usually give rise to a mediastinal mass, but some other tumor may be responsible.

Doctor Smith: Mr. Hamer, what do you think was the cause of death?

Student Hamer: I think he succumbed to a terminal pneumonia.

Doctor Smith: Do you think an EKG would have been an aid in this case?

Student Hamer: No, I don't believe so.

Doctor Smith: Mr. Reese, suppose you tell us of the episode this patient had while at Pinehaven.

Student Reese: He developed distended neck veins, enlargement of the heart with rapid rate and irregular rhythm, enlarged liver, slight ankle edema and was quite dyspnoeic. He was given digitalis and these findings cleared up.

Doctor Smith: Mr. Turner, what does such a course of events indicate to you?

Student Turner: I think he had right sided heart failure from extensive pulmonary fibrosis with impairment of circulation and I think his terminal state was from a similar break in compensation. Incidentally, I don't think a tracheotomy was indicated.

Doctor Smith: Asbestos bodies were found in this man's sputum. Mr. MacLauchlin, of what significance do you think these are?

Student MacLauchlin: I think they mean that this man had asbestosis.

Student Mack Simmons: I have not heard sputum described as milky before and wondered if it was really chylous or just white and frothy. Erosion of the thoracic duct with the escape of chylous fluid into the lung could conceivably account for such a finding.

Doctor Kelley: Doctor Kalayjian at one time considered a calcified aneurysm filled with blood clot. I think it is significant, however, that there was no inequality of the pupils, and that the B. P. and carotids were equal on both sides.

Doctor Lynch: (Demonstrating lungs and heart). This man had asbestosis. I think a lesson can be learned from this case in that radiographic widening of the mediastinum does not necessarily mean that a mass is present for there was no mass present here. The shrunken, fibrotic lungs were pulled away from the mediastinum so that it was widened.

There is a tremendous thickening of the visceral pleura so that it is practically cartilaginous in consistence. The lungs are tough, leathery and marbled, with badly scarred apices. The latter is not a usual finding in any of the pneumoconioses, particularly asbestosis, and it is speculative as to whether or not he had tuberculosis. It is not definitely recognizable as such, but there is a small cavity in the right apex and this together with the apical scarring, I believe, represents old tuberculosis. It was once thought that asbestosis predisposed to or aggravated tuberculosis, but this is no longer held.

In addition to the lung findings he had hypertrophy and dilatation of the right heart with chronic passive congestion of the liver and was in a state of right heart failure. He died of lobular pneumonia, however, as they all do unless acute heart failure supervenes.

I must warn you not to jump too far towards a diagnosis of asbestosis, just because a person has worked in an atmosphere containing asbestos dust. We have had a considerable number of cases that have worked in such an atmosphere longer than this man did who did not have asbestosis. I like to

limit the term asbestosis to considerable disease of the lung, as we have a small amount of fibrosis and asbestos bodies in the lung not infrequently. Finding the asbestos bodies in the sputum simply means that the person has breathed asbestos dust and does not indicate the extent of the process. We have had fatal cases of asbestosis in which they were not found in the sputum.

I also want you to guard against relating carcinoma of the lung and asbestosis. We have seen carcinoma of the lung and asbestosis in the same patient, but this doesn't necessarily mean a thing. So far as is known there is no carcinogenic agent in asbestos dust.

Doctor Smith: It is to the credit of the surgical department that a tracheotomy was not performed. I will have to admit that I thought the mediastinal widening in this case was indicative of some type of mass, but do not know why I was led to such a supposition as I have seen a similar case that presented almost identical findings. I would like to read you a progress note from the chart: "Consultation with Doctor Cannon and Doctor Robert Wilson. They think of an aneurysm." (Laughter).

OBSTETRICS AND GYNECOLOGY

J. D. GUESS, M.D., GREENVILLE, S. C.

PREGNANCY AND DIABETES MELLITUS

Many physicians with large practices have never cared for a pregnant diabetic woman. Diabetes is either caused by or accompanied by more than a disturbance of the islands of Langerhans in the pancreas. There is in moderately severe diabetes a profound disturbance in the balances of the endocrine functions. This disturbance in endocrine balance affects the genital mechanism, so that there is usually a marked alteration in the menstrual function and a definitely low fertility. Such women menstruate infrequently and scantily and they rarely conceive.

There is still another reason why diabetes and pregnancy so infrequently occur. Diabetes mellitus is typically a disease of childhood and youth. Before the discovery and availability of insulin, there were relatively few adult women suffering from the disease, because these young patients died before reaching maturity. Insulin has changed that, and there

will be seen increasing numbers of diabetic gravida.

Coexisting diabetes and pregnancy greatly multiply the problems of each condition, and when they are available, such a case should be treated by a very competent and experienced obstetrician, working in close collaboration with a man skilled in the management of diabetes. Reliable laboratory facilities should be available. Were such care always possible there would be no excuse for this article, for such men have had as much or more experience in treating this condition as has the author.

It is interesting to find that even from the large clinics the series of cases of pregnancy and diabetes reported are so small as to be inconclusive, and there is considerable conflicting opinion and speculation with regard to the etiology of symptoms and complications and in regard to treatment.

Certain things may be expected in this type of case. The diabetes is apparently benefitted by the pregnancy, especially in the last tri-

mester. The insulin requirements become considerably less, and if blood sugar levels are not carefully watched not only is a condition of chronic hypoglycemia likely to develop, but hypoglycemic shock may become quite troublesome. In the first trimester the same conditions may occur, because of nausea, vomiting and anorexia.

Toxemia of late pregnancy is a very frequent and dreaded complication. This is likely to be sudden and fulminating. Large doses of estrogenic substance along with progestin have been reported to be of considerable value in preventing this, but thus far this information is of little practical value because of the expense involved in such treatment.

Abortions and premature labors are frequent, and in case of the latter the baby is usually macerated. If allowed to go to term, the baby may be very large and very fat and is likely to be stillborn. The better practice at this time appears to be to deliver at about the end of the thirty-fifth week, and to deliver by caesarean section. Both because inhalation anesthetics are not well borne by diabetics and because of their depressing effect upon the infant, anesthesia should be, in the order of preference, local infiltrative novocain, spinal anesthesia, nitrous oxide and oxygen. None of these should be preceded by morphia or the barbiturates.

The babies of these mothers are sluggish and very slow to initiate and establish respiration, and several measures seem to be essential to their survival, namely, freedom from depression by anesthetics and sedatives administered to the mother, careful clearing of the air passages, avoidance of trauma of every kind, administration of oxygen as often and as long as cyanosis occurs, and this may be at intervals during several days, the administration of dextrose frequently, controlled if possible by blood sugar determinations, maintenance of body heat, and establishment of

food tolerance. Before the days of insulin the infant mortality was over forty per cent, and it is still quite high, when facilities for the care outlined do not exist.

The mother presents a problem similar to that of other surgical diabetic patients but with important differences. She must be guarded against acidosis, diabetic coma, and wound infection as in the ordinary patient. But in addition some of these women have to be guarded against chronic hypoglycemia and hypoglycemic shock, and this requires laboratory control, close attention to detail and excellent judgment. For some reason, after delivery, some of these patients develop symptoms of hyperinsulinism. Two important suggestions in explanation have been made. One is, that the pancreas having had a long rest from excessive demands for insulin, the mother having utilized the pancreatic function of the baby, improves in functional capacity and responds excessively to the presence of sugar in the blood. This seems to me a little improbable. Pregnancy, labor, the puerperium, lactation all are accompanied by changes in the pituitary secretory functions, with successive upsets in previously maintained balances. These pituitary changes may and probably do cause the changes in sugar metabolism. In a recent case, where it had seemed to be impossible to raise to and to maintain the blood sugar level at a point much beyond 50 mg. per cent, there was a steady and maintained rise in the level beginning coincident with the administration of pituitrin. This is not of course conclusive evidence that posterior pituitary secretion was the lacking hormone necessary to the reestablishment of the balances present before the onset of pregnancy, but it is suggestive.

Diabetics usually lactate poorly, but the establishment of lactation has little effect upon the blood sugar level or the insulin requirement.

Rest in bed will do more for more diseases than any other single procedure. The rest cure is not designed alone for worn-out nervous systems. With it we can treat heart diseases without drugs, tuberculosis without climate, appendicitis without surgery.

Without it we can do nothing. Rest seems to tap the great reserve forces of Nature and bring them welling back, to the sick body and the sick spirit.

Methods of Treatment.

Clendening & Hashinger

WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

COLUMBIA MEDICAL AUXILIARY

On December 11th the Woman's Auxiliary to the Columbia Medical Society honored the wives of the medical officers at Fort Jackson with a tea in the Crystal Room of the Columbia Hotel. About 150 guests called during the afternoon.

In the receiving line were: Mrs. Leo Hall, Vice President of the Auxiliary, Mrs. H. L. Timmons, President of the Woman's Auxiliary to the S. C. Medical Association; Mrs. Charles B. Demmer, wife of the Corps Surgeon of the First Corps of the First Army; Mrs. Thomas B. Scott, wife of the Post Surgeon at Fort Jackson Hospital; Mrs. Clyde Johnston, wife of the Division Surgeon of the Eighth Division; Mrs. E. F. Fenner, wife of the Executive Officer of the 105th Medical Regiment and Mrs. Manly E. Hutchinson, Chairman of the tea. Each of these ladies was presented with a corsage of roses.

The table was covered with a beautiful cloth, the center piece being a stunning long arrangement of red gladioli softened by mistletoe, and at each end were tall silver candleabra with red tapers. From this table sandwiches, cakes and mints were served. Two semicircular side tables with a gleaming silver service were presided over by Mrs. O. B. Mayer, President of the Columbia Auxiliary and Mrs. Wm. Moncrief, wife of Colonel Moncrief, of State Park.

Acting as assistant hostesses were: Mrs. Wm. Weston, Sr., Mrs. Wm. Weston, Jr., Mrs. Theodore J. Hopkins, Mrs. A. Izard Josey, Mrs. A. T. Moore, Mrs. J. T. Green, Mrs. Jenkins Mikell, Mrs. W. T. Barron, Mrs. Heyward Gibbes, Mrs. R. B. McNulty, Mrs. T. A. Pitts, Mrs. Robert Durham, Mrs. Marion Wyman and Mrs. H. G. Wadell.

OCONEE COUNTY MEDICAL AUXILIARY

The Oconee County Medical Auxiliary met at the home of Mrs. B. F. Sloan, Walhalla, S. C., December 10, 1940. Mrs. S. H. Ross, Jr., the President, presided. The meeting was opened with a Christmas devotional by Mrs. Sloan and roll call was answered with a health rule by the members present.

During the business session the Auxiliary decided to place a memorial lamp in honor of the late Dr. E. A. Hines, Chairman of the Advisory Council to the Woman's Auxiliary of the S. C. Medical Association, in the medical library of the Oconee County Hospital.

Dr. W. E. Baldwin, Director of the County Health Dept., gave an interesting talk on his observations

of the treatment of tuberculosis patients in the hospitals at Saranac Lake, New York. Dr. Baldwin was one of two doctors in South Carolina who was awarded a two months scholarship this past fall by the National Tuberculosis Association through the State Tuberculosis Association for this special study. Mrs. J. W. Bell of Walhalla told in an attractive manner of the meeting of the Southern Medical Auxiliary held in Louisville, November, 1940, and of which organization she was the recent Corresponding Secretary.

During the social hour the hostess served a delicious salad course with coffee.

COLUMBIA MEDICAL AUXILIARY

The Woman's Auxiliary to the Columbia Medical Society met on January 7 at the home of Mrs. Frank C. Owens. Mrs. Leo Hall, Vice President, presided in the absence of Mrs. O. B. Mayer, President.

Committee reports were given. Dr. Edith Eskridge spoke on the preservation of the medical library housed in the Richland County Public Library. Mrs. A. Izard Josey announced Mrs. James T. Green would be Publicity Chairman and Mrs. Manley E. Hutchinson announced Mrs. Wm. Fox would be Public Relations Chairman. These Chairmen took the place of Mrs. Josey and Mrs. Hutchinson, whose husbands had been assigned to duty with the 263rd Coast Artillery Medical Corps, Fort Moultrie and who resigned as they would be out of the city for some time.

The guest speaker was Colonel Sumner Waite of Fort Jackson who was an eye witness to the battle of France and spoke most stirringly on that subject.

After the business session delightful refreshments were served from a beautifully appointed table. Assistant hostesses were Mrs. T. J. Hopkins, Mrs. Robt. Seibels, Mrs. Eugene LaBorde, Mrs. Oscar LaBorde, Mrs. J. T. Watson, Mrs. George McCutchen, Mrs. Roy Smarr and Mrs. D. S. Asbill.

SPARTANBURG COUNTY MEDICAL AUXILIARY

Mrs. D. L. Smith, Jr., of Spartanburg entertained the Woman's Auxiliary to the Spartanburg County Medical Society, Tuesday, October 29. During the business session Mrs. Jesse O. Willson gave a report of the Executive Board meeting of the S. C. Medical Auxiliary which she and Mrs. Dennis Hill attended in Columbia, October 15.

Dr. Ruth Frank Pugh of Converse College was the guest speaker having for her topic, "The College Doctor's work with the Students."

Jane Todd Crawford Memorial will be observed next month by the Spartanburg Auxiliary.

After the program the members and guests were entertained at tea by the hostesses, Mrs. D. L. Smith, Jr., Mrs. D. L. Smith, Sr., and Mrs. Ruth Keller.

Mrs. R. Dennis Hill.

A MESSAGE FROM THE STATE HISTORIAN

The State Historian's work is most interesting—keeping alive the past, present and studying our future.

The history of the Woman's Medical Auxiliary to

the South Carolina Medical Association has been written to date since its organization in Charleston, S. C. in 1923. Each year histories and records of the County Auxiliaries are written up and added to this volume.

Perhaps the most important work of the historian is writing the biographies of our faithful and beloved physicians who worked so hard in the pioneer days. At the present we have 248 biographies and hope by the end of this year to have many more.

Another interesting phase of historical work is the Strait Trophy which is given to the county auxiliary whose historian sends in the best account of unit activity for the year.

May the county historians strive with me to make this the best year in Medical Auxiliary History.

Mrs. J. E. Orr

MEDICAL PREPAREDNESS

NINETY PERCENT OF SOUTH CAROLINA PHYSICIANS HAVE RETURNED THE QUESTIONNAIRES

The medical preparedness program in South Carolina got under way immediately following the call from the A. M. A. to "mobilize" the physicians for national defense. Under the direction of the central committee, composed of Dr. E. A. Hines, (Chairman), Drs. Tom Pitts and W. L. Pressly, committees were appointed for every county in the state. In October a meeting was called in Columbia at which time nearly a hundred doctors heard Governor Maybank, and others, outline the situation.

The first objective was to get every doctor to fill in the questionnaire sent out by the A. M. A. This task has been ably performed by the central committee, Councillors of the eight districts, county committeemen and individual doctors, who interested themselves in seeing that this part of the program was carried out.

For months this state ranked next to the last in the Fourth Corps Area in the return of the questionnaires. However, the work of getting the schedules finished went on and the reports from the A. M. A. began to look better and better. It might be of interest to see the progress in percentages.

South Carolina physicians handing in the questionnaires:

Oct. 5, 1940	47%
Nov. 9, 1940	69%
Dec. 18, 1940	75%
Jan. 6, 1941	79%
Jan. 13, 1941	84%
Jan. 23, 1941	90%

In other words, of the 1402 doctors in this state by the A. M. A., 1262 have schedules now in Chicago. This is a fine record. From fifteen of the forty-six counties, there is a blank filled in for every single physician. These counties and their chairmen for medical preparedness are as follows:

Anderson	Dr. Frank Wrenn
Calhoun	Dr. G. M. Truluck
Cherokee	Dr. J. C. Hall
Clarendon	Dr. Scott Harvin
Colleton	Dr. L. M. Stokes
Darlington	Dr. O. A. Alexander
Dillon	Dr. W. S. Bethea
Greenwood	Dr. W. P. Turner
McCormick	Dr. J. B. Cousar
Lee	Dr. Robert C. Brown
Lancaster	Dr. T. H. Pope
Newberry	Dr. J. W. Bell
Oconee	Dr. C. M. Tripp
Pickens	Dr. P. K. Switzer
Union	Dr. C. D. Jacobs
Williamsburg	

At the height of the campaign, due to the untimely death of the Chairman, Dr. E. A. Hines, there was a change in the personnel of the central committee. Dr. W. L. Pressly was

asked to take charge of the work. Dr. Hines was very deeply interested in this program and I am indeed greatly indebted to him for his fine work. He had hoped to complete the work. Dr. G. E. McDaniel, Director of the Division of Preventable Diseases has recently been added to the committee to represent the State Board of Health.

The Councillors, Dr. F. G. Cain of the First District, Dr. Tom Pitts of the Second, Dr. J. D. Harrison of the Third District, Dr. Hugh Smith of the Fourth, Dr. Roderick McDonald of the Fifth, Dr. Julian Price, the Sixth, Drs. E. T. Kelley and L. P. Thackston of the Seventh and Eighth Districts respectively, have

all worked very hard to get every physician in their District to turn in the questionnaires. So far, the Third District is the only one in which this phase of the medical preparedness program is absolutely finished, but it will not be long before we can say that the entire state is one hundred percent.

With between fifty and sixty connected with CCC Camps, U. S. Naval and Veterans Hospitals, 107 in the Medical Reserve (many already called), nearly 1300 listed and classified, we feel that practically the entire medical profession of South Carolina is ready for whatever the future may hold.

BOOK REVIEWS

In order to make the books reviewed here more readily available to the members of the Association, a temporary arrangement has been made whereby books after review are loaned to the Library of the Medical College of the State of South Carolina, from which they may be borrowed by mail or otherwise by any member of the Association.

CLINICAL PELLAGRA. By Seale Harris, Professor Emeritus of Medicine, University of Alabama, and Seale Harris, Jr., formerly Assistant Professor of Medicine, Vanderbilt University—with foreword by E. V. McCollum, Professor, Biochemistry School of Hygiene and Public Health, the Johns Hopkins University. Illustrated. St. Louis. The C. V. Mosby Company, 1941. Pages, 494.

An up-to-date treatise on pellagra which includes a review by certain prominent Southern scientists of their contributions to the subject, as well as certain hitherto unpublished observations. The clinical theory and practice of earlier years is faithfully recorded and the therapeutic use of nicotinic acid is amply described. The style is easily readable and the bibliography complete.

William H. Kelley

FOREIGN BODIES LEFT IN THE ABDOMEN. H. S. Crossen and D. F. Crossen. C. V. Mosby Co., St. Louis, 1940, pp. 762. (\$10).

This recently published work well fulfills the aim of the authors to emphasize to surgeons the danger of leaving a sponge or other foreign body in the abdominal cavity, to present the treatment of such cases, and to point out the difficulties of avoiding this accident under conditions of stress. Methods

of prevention are thoroughly considered. In view of the hundreds of reported cases of lost sponge Dr. Crossen has reviewed and described in this book one cannot deny that his own method of continuous roll sponge is an excellent means of prevention. Careful sponge counts and examination of the field of operation before closure, the commonest safeguards in general use, may be inadequate. Many interesting cases of retained instruments and drains are reported. There is an excellent section on swallowed articles including those that may be mistaken for articles left at operation. The medico-legal aspects receive frequent mention and the concluding section by Dr. D. F. Crossen presents tabulations and interpretations of court actions in the various states. The book contains numerous tables, well-chosen illustrations, a long bibliography, and an adequate index. It is a reference work that should be available to every abdominal surgeon.

F. E. Kredel

METHODS OF TREATMENT. By Logan Clendenning, M. D., Clinical Professor of Medicine, Medical Department of the University of Kansas and Edward H. Hashinger, A. B., M. D., Clinical Professor of Medicine, Medical Department of the University of Kansas. With chapters on special subjects by twelve other contributors. The Seventh Edition, St. Louis, the C. V. Mosby Company.

This is the new edition of a deservedly popular book on treatment. It contains a number of entirely new sections, and many parts have been extensively rewritten. The book is very readable and contains a satisfactory number of tables for the doctor who is in haste. In many parts there is a commendable

beauty of brevity, and in other sections in which the author (Dr. Clendening) indulges in what he calls the "luxury of some philosophic comment" appear many passages quite worthy of quotation. There has likewise been a very apt selection of quotations from the classical work on various diseases. Altogether, this book seems to be a very desirable one for anyone engaged in treatment. J. I. W.

PNEUMOCONIOSIS (SILICOSIS). THE STORY OF DUSTY LUNGS. A Preliminary Report. By Lewis Gregory Cole, M. D., Director of Silicotic

Research, John B. Pierce Foundation, New York City and William Gregory Cole, M. D., New York City. John B. Pierce Foundation, New York. 1940.

This volume is made up of two parts. The first describes the authors' materials and method of investigation. All phases, including the legal, are discussed. Pathologic changes are presented in detail. From the studies it is concluded that more than ninety per cent of cases now recognized as "silicosis" are not compensable, but that other types are eminent-ly due to have compensation.

The second part consists of two reprinted articles. J. I. W.

NEWS ITEMS

DR. W. L. PRESSLY GIVEN POST ON STATE BOARD

Dr. W. L. Pressly of Due West, President of the South Carolina Medical Association, has been elected to fill the unexpired term of the late Dr. E. A. Hines on the executive committee of the State Board of Health.

The following officers of the Medical Reserve Corps have been called to active duty:

Drs. John T. Cuttino	1st Lieut.	Columbia
George G. Durst	"	Greenville
Lucius B. Keels	"	Bishopville
Joseph H. King	"	Summerton
Francis C. McLane	"	Abbeville
Harold L. Poole	"	Spartanburg
Keith Sanders	"	Kingstree
Edwin M. Sirlin	"	Moultrie

Dr. A. J. Buist, Jr., of Charleston has been called out in the Naval Reserve Corps.

Drs. T. T. Blalock of Charleston and J. J. Kane of Beaufort have entered the Army Medical Corps by examination.

Dr. Abraham Rosenfeld, Dillon, has been called to active duty from the Medical Reserve. Dr. Yeadon Hyer, Darlington, and Dr. D. Lesesne Smith, Jr., Spartanburg, have had their orders to duty revoked.

Dr. J. P. Young, Jr., who has recently been in Tennessee, has established his practice at North Charleston, S. C.

The National Youth Administration has been circularizing the doctors of the State in connection with the initiation of a statewide health project, in line with the National Defense Program. This is a cooperative arrangement between the U. S. Public Health Service, the State Health Department and

private physicians, whereby an effort is being made to promote highest standards of health and physical fitness for persons employed in N. Y. A. Out-of-School Work Program. Physical examination, correction of defects and technical advice on nutrition, sanitation, physical development and recreation will be offered. County Health Departments will be asked to immunize participants against small-pox and typhoid fever, and to make tests for malaria, tuberculosis, syphilis, venereal diseases and hookworm. Exactly what part the practicing physician is to play has not yet been announced. Dr. James A. Hayne, State Health Officer, is directing the program.

The January meeting of the staff of the York County Hospital was held in Rock Hill. A scientific program was presented by Doctors Maguire and Chamberlain of Charleston. Dr. Maguire gave a review of the cases of acute appendicitis treated at the Roper Hospital for the past five years, and pointed out the fact that the two chief reasons for the high mortality rate in this disease were delay in operation and the use of purgatives. Dr. O. B. Chamberlain spoke on nervous diseases in internal medicine, pointing out that neurology was only a part of internal medicine and was a considerable element in a great many diseases, and no longer an academic subject. The talks were very much enjoyed and the staff expressed a desire to have the visitors appear again soon.

L. L. HAY, Secretary
York County Medical Staff.

The Esdorn Hospital at Walterboro is completing alterations and additions which will make considerable improvement in the facilities of the hospital. A new elevator and an eight-room addition will be among the new structures, and the whole hospital will be improved in many respects.

MINUTES OF FLORENCE COUNTY MEDICAL
SOCIETY HELD AT HOTEL FLORENCE
JANUARY 23rd, 1941

The meeting was presided over by Dr. W. H. Poston, Vice-Pres. in absence of the President, Dr. D. M. Evans, of Lake City. He immediately introduced the visiting speakers, Drs. J. R. Allison and A. C. Wheeler of Columbia, S. C. Dr. Allison discussed "Venereal Diseases from a Dermatological Standpoint," showing lantern slides as illustrations, after which he called on Dr. Wheeler to discuss the treatment of these various conditions.

After the program was completed election of officers took place—those elected being: Pres., Dr. J. H. Stokes, Florence; Vice-Pres., Dr. W. E. Hicks, Sardis; Secretary Treasurer, Dr. H. W. Herbert, Florence. Dr. Stokes, as President, was also elected to represent the Society at the State meeting in April, with the hold-over delegate of last year, Dr. W. H. Poston of Pamplico. It was decided that delegates would appoint their alternates themselves if they could not attend the meeting.

We were pleased not only to have twenty members of our county society present, but also eight visitors from the surrounding counties, including the two guest speakers. This was particularly encouraging considering that the Darlington County Society met on the same night.

Dr. Charles A. Mobley of Orangeburg, South Carolina, was highly honored when the Medical Staff of the Tri-County Hospital at Orangeburg presented the institution with a life size oil painting of the doctor, Sunday afternoon, January 5. The presentation was made by Dr. L. P. Thackston, Chief of the Staff, in recognition of the services of Dr. Mobley who through the establishment of the Orangeburg Hospital twenty-one years ago provided the foundation from which grew the present modern Tri-County Hospital. Mr. W. E. Atkinson, Chairman of the Board of Trustees, accepted the painting. The unveiling and presentation ceremonies took place in the lobby of the hospital in the presence of the members of the medical staff, the trustees and a number of friends. Dr. Mobley has been active in medical circles and the civic welfare of the public. In 1918 he was elected a Fellow of the American College of Surgeons and during the World War he rendered valuable service as a member of the Medical Advisory Board at Greenville, S. C. At the meeting of the S. C. Medical Association held in Florence, May 6, 1930, Dr. Mobley was elected President Elect and served as President of the Association in 1931-32. The many friends of the doctor within and beyond the borders of the state will be pleased to learn of the recent honor bestowed upon him.

Dr. Frank C. Owens of Columbia was appointed during the month of January, State Chairman for

South Carolina for the infantile paralysis campaign by Keith Morgan, National Chairman. It was the hope of those in charge of the campaign in South Carolina that contributions to the fund in this state would reach the ten thousand dollar mark and a number of entertainments have been held in different localities to help raise this amount. Part of the fund that is accumulated will be sent to the National Foundation and part retained for work in the state.

Dr. Landrum Walker Wood, 51, widely known physician of Slater, S. C., died December 28, at 2:45 A. M., after several months of declining health. He was born and reared near Greer, the son of the late Tandy W. Wood and Jane Hill Wood. After attending the public schools at Reidville he graduated in 1914 from the Atlanta Medical College, now Emory University, with honors. Since that time, with the exception of service during the world war, he practiced in several towns in the state, moving to Slater eleven years ago. Dr. Wood was active in civic affairs having been a member of the Board of Trustees of the Slater-Marietta school and a member of the Masonic and Shrine Orders. At the time of his death he was a member of the Greenville County Medical Society. Funeral services were held Sunday afternoon, December 29.

Dr. Austin T. Moore, Superintendent of the Orthopedic Hospital and Moore Green Clinic in Columbia attended the meeting of the American Academy of Orthopedic Surgeons in New Orleans, January 13-16. Dr. Moore discussed papers on vitallium and stainless steel metals used in bone surgery.

Dr. Eugene Leroy Horger, Clinical Director of the South Carolina State Hospital, became a foundation Honorary Member of the Wofford College Chapter of Phi Beta Kappa at initiation ceremonies held in the Cleveland Hotel, Spartanburg, Tuesday, January 14. He was advised of his election to Honorary Membership because of his scholarly attainments and his cultural interests since his undergraduate days at Wofford College.

In addition to his connection with the State Hospital Dr. Horger is neuro-psychiatric examiner at the State Penitentiary, designated specialist at the United States Veterans' Facility in Columbia, Associate in Clinical Psychiatry at the Medical College in Charleston, honorary lecturer in mental disorders, school of social work at the University of South Carolina and an Associate Editor of the Journal of the South Carolina Medical Association.

Dr. Horger was the first of three psychiatrists in South Carolina to receive a certificate as specialist in neuro psychiatry from the American Board of Neurology and Psychiatry in 1937 and he holds offices in the National American Psychiatric Association.

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The range of variation in the vitamin A content of market milks, both fresh and evaporated, is as great as 35% between Summer and Winter.¹

S.M.A. is consistently high in vitamins every month of the year. Each quart of S.M.A., ready to feed, contains:

- 10 mg. iron and ammonium citrate
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Vitamin supplements, other than the customary orange juice feedings, are usually unnecessary.

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1. Dornbush, A. C., Peterson, W. H., and Olson, F. R.: "The Carotene and Vitamin A Content of Market Milks." J.A.M.A., May 4, 1940, pp. 1748-1751.

" " "

*S.M.A., a trade mark of S.M.A. Corporation, for its brand of food especially prepared for infant feeding—derived from tuberculin-tested cow's milk, the fat of which is replaced by animal and vegetable fats, including biologically tested cod liver oil; with the addition of milk sugar and potassium chloride; altogether forming an antirachitic food. When diluted according to directions, it is essentially similar to human milk in percentages of protein, fat, carbohydrate and ash, in chemical constants of the fat and chemical properties.



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Protein S.M.A. (acidulated) is a modified form of S.M.A., intended to meet the special nutritional needs of the premature and undernourished infant and for infants requiring a high protein intake.

Protein S.M.A. (acidulated) is similar to both casein milk and lactic acid milk, but presents additional nutritional elements lacking in both.

The friends and relatives of Dr. Major Frank Fowler, a native of Mullins, S. C., will be interested to hear of his recent selection as President Elect of the Fulton County Medical Society of Atlanta, Georgia. Dr. Fowler is also Chief of Staff at St. Joseph's Hospital in Atlanta. He has been practising in Atlanta for several years and is a son of the late Mr. and Mrs. Major Fowler of Mullins.

Dr. Marion Mathias of Charleston has been ordered into the Army.

Dr. Arthur W. Welling, Newberry, has gone to Carlisle Barracks, preliminary to assignment at Camp Beauregard, La.

It is reported that arrangements have been completed for the erection of a hospital in Dillon by the Roman Catholic Church in South Carolina.

At the December meeting of the Greenville County Medical Society, Officers elected for 1941 were:

Dr. J. Warren White, Vice Pres. & President-Elect.

Dr. Keitt Smith, Secretary.

Dr. T. M. Northrop, Treasurer.

Dr. C. C. Ariail is the President for the year.

Dr. Clay Evatt of Charleston has been appointed on the Medical Advisory Board of the District of Berkeley, Charleston and Dorchester Counties for the Department of Otolaryngology.

Officers of the Columbia Medical Society (Richland County), for the year, are: Dr. William Weston, Jr., President; Dr. S. W. Talbert, Vice President; Dr. R. B. McNulty, Secretary; and Dr. W. A. Hart, Treasurer.

The practitioner who begins to use these ductless gland products has many disappointments in store for him. There are several reasons for this. One is that speculation in this field is so fascinating that enthusiasm is frequently kindled without any real foundation for the procedure existing. Then, too, very few endocrine syndromes are simple—few are due to the failure of a single secretion. Besides, as has been noted these secretions modify each other. To mention one example, when the anterior pituitary is deficient, the symptoms are likely to be noted in the field of gonadal failure.

Methods of Treatment,
Clendening & Hashinger.

*For the Local Treatment
of Acute Anterior*

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(DUE TO NEISSERIA GONORRHEAE)

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A complete technique of treatment and literature will be sent upon request

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I. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph. Gon. & Ven. Dis.*, 23, 201 (March) 1939.

*Silver Picrate, is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

From the *Charleston News & Courier*, describing hospital improvements:

"A thoroughly equipped clinical laboratory has a pathological connection with the College of Charleston."

Looks like a job for a surgeon or a psychiatrist.

What value has climate? In the minds of patients certainly it is the first thing thought of when tuberculosis is mentioned. In the minds of physicians accustomed to the treatment of such patients climate is often considered a matter of little moment. The relative importance of methods of treatment from the viewpoint of the physician and the viewpoint of the patient differs about as follows:

Patient's View	Physician's View
CLIMATE	REST
SERUM (of some kind)	FOOD
Medicine (of some kind)	Air
Exercise	Climate
	Medicine
	Methods of Treatment.
	Clendening & Hashinger

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GROUNDS 600 ACRES
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- Price: Pessalator and Pessary \$1.50 each. Samples (limited) 60% discount.

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THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

March, 1941

NUMBER 3

A Consideration of Suture Material*

WM. H. PRIOLEAU, M. D., CHARLESTON, S. C.

No apology is offered for the presentation of this subject as it is one which properly comes up for consideration before every surgical forum at periodic intervals. Such discussion is not likely to lead to general agreement or regimentation, nor is it desirable that it do so. The reason is obvious—the complexity of the subject is too great and our knowledge is constantly increasing.

The results obtained from the use of any suture material are dependent not only upon its inherent nature, but also upon the manner and conditions of its use.

It can be safely stated that no suture material is ideally adapted to all conditions. Likewise it follows that some suture materials are suitable for some conditions and entirely unsuitable for others. A few further generalizations can be made. Material suitable for suture purposes should be generally available and properly packaged in reels or cut lengths according to the intended use. It should permit of easy sterilization or come thus prepared by the manufacturer. It should incite a minimal amount of tissue reaction so as not to retard unduly wound healing. Ease of handling is of importance according to the technical ability of the operator. Security of knotting is essential, particularly when holding is required. Permeability is deserving of consideration as

it is an important factor in the rate of destruction of absorbable sutures, and in sinus formation in nonabsorbable sutures due to the tissue cells growing into the sutures, and the granulation tissue between the fibrils keeping up the infection.

Suture material should be as inexpensive as is consistent with its intended use. This is becoming an increasingly important factor with the rising cost of medical care. In general this particular item is unnecessarily high because too many physicians on account of pressure of routine work, being slaves of convention, ignorance, thoughtlessness, extravagance, and susceptibility to commercial advertising, use more expensive suture material than the needs of the case require. Moreover, often some less expensive suture material would serve the purposes better.

The factor of absorbability can not be easily dismissed. It is the point around which most of the discussion of suture material centers. The main advantage of a suture's being absorbable is that in the presence of infection it is completely destroyed, and thus does not remain to give subsequent trouble, whereas non-absorbable sutures may lead to the formation of persistent sinuses, resulting from infection centering around them. In some instances it is necessary for the nonabsorbable sutures to be extruded or removed before the sinuses will close. Arguments against the use of absorbable suture material are that it provokes an exudative tissue reaction which retards wound healing, and predisposes to infection. Absorbable

*Read before the Surgical Club of the Medical College of the State of South Carolina, December 2, 1940.

From the Department of Surgery of the Medical College of the State of South Carolina.

suture material may be prematurely absorbed and the wound deprived of much needed support before healing has progressed sufficiently to furnish a firm union. Particularly is this the case in the presence of infection where absorption is unduly rapid, the suture material itself being attacked by the bacteria, and healing is much delayed. On the other hand, non-absorbable sutures provoke very little tissue reaction, and accordingly retard healing and predispose to infection only to a slight degree. Also, even in the presence of infection, they retain their holding power well beyond the time necessary for firm healing to take place. Not uncommonly at secondary operations for wound dehiscence where catgut has been used at the primary operation, no traces of catgut are found, apparently all having been absorbed.⁽¹⁾ As regards infection, Whipple⁽²⁾ showed that by the use of silk in a 3 year period serious wound infections were reduced from 1.9% to 0.7%, and trivial infections from 8.9% to 1.5% in supposedly clean cases. Furthermore Shambaugh and Dunphy⁽³⁾ showed that wounds closed with silk better tolerated slight bacterial contamination than wounds closed with catgut. Meade and Ochsner⁽⁴⁾ state that the present fear of nonabsorbable suture material is greatly accounted for by improper use in the past and the fear of foreign bodies. On the other hand, there is much in the contention that the disadvantages commonly attributed to catgut are greatly reduced by its proper use.

Suture material can not be properly considered apart from its use. Certain principles are applicable to the manner of use of all suture materials. The quantity should be the minimum necessary for the requirements of the case. Tissue trauma should be guarded against by avoiding undue tension and strangulation. Beyond a certain point increased tensile strength of the suture does not add to the strength of the closure; this is effected by additional sutures. That sterility is an absolute necessity is obvious, but it should be borne in mind that its attainment presents a problem particularly with absorbable sutures.

The use of silk has been the subject of many articles lately, however little if anything has been added to the original tenets layed down by

Halsted⁽⁴⁾. It would be well to state them inasmuch as they are equally appropriate for catgut with the one exception that catgut can be used as a continuous suture. (1) Use interrupted sutures only. (2) Use silk not coarser than C. (3) Never bridge over a dead space as a chord subtends an arc. (4) Use transfixion sutures in ligation as finer sutures can be used. (5) Use a greater number of the stitches rather than a few coarse ones. (6) Avoid the combined use of silk and catgut.

With these thoughts in mind, some consideration may be given to several of the more commonly used suture materials.

Catgut is of animal origin and protein in nature. It is obtained by processing the submucosa of the intestine of sheep. It is absorbable, but this factor is in part controlled by its treatment with chemicals. Its absorbability is further affected by hemorrhage, tissue necrosis, infection and individual constitutional reactions of the patient. Apparently an allergic reaction to catgut does not occur.⁽⁵⁾ Catgut is easily handled. Only a triple throw knot can be relied upon.

Catgut causes an inflammatory reaction with leucocytic infiltration and exudation. This in turn delays the onset of wound healing for several days. Thus the catgut may be absorbed before wound healing has started. On account of the tissue reaction the wound is less able to withstand contamination.

Its sterilization is now done only by the manufacturer. It is an expensive and technical procedure, so much so that in 1931 Meleney and Chatfield⁽⁶⁾ demonstrated that unsterile catgut was a source of infection in post-operative wounds. They found unsterile some of the products of seven out of seventeen manufacturers of catgut. In 1935 Clock⁽⁷⁾ noted that the publication of the above study had had little effect in removing from the market unsterile catgut products. Up to the present time there have been enforced no definite requirements in this respect. It now appears as if this will be taken care of by the Food and Drug Act.

Catgut is expensive—many times more costly than nonabsorbable suture material used for the same purpose. Its expense is added to by

the fact that unused catgut cannot be resterilized.

Bates⁽⁸⁾ has made a number of interesting observations upon the use of catgut. Large plain catgut is absorbed almost as rapidly as small plain catgut. Small chromic catgut functions longer than very large chromic. Plain catgut excites a prompt and violent exudative reaction. This greatly retards healing as judged by the appearance of fibroblasts. Chromic catgut causes less exudative reaction, and accordingly healing starts earlier.

Catgut is probably the most commonly used suture material for buried sutures. This is attributed almost solely to its absorbability, which obviates the danger of its use resulting in sinus formation. Its disadvantages are diminished by the use of a careful technic similar to that used with silk.

Silk is probably the most commonly used nonabsorbable suture. It is easily sterilized by boiling or autoclaving. It is generally available. It is very pliable and thus somewhat difficult to handle. Unless waxed, it forms a firm knot. Its chief asset lies in its producing relatively little tissue reaction. Accordingly in its presence healing is not delayed. Likewise its presence does not predispose to infection. On the other hand, in the presence of gross infection, there may result sinuses leading to the silk sutures. This is attributed to the permeability of the silk permitting the ingrowth of granulation tissue. Of great importance is the fact that silk is not destroyed by bacteria and accordingly it supports the wound until healing takes place. The use of silk has been the subject of many articles lately. However little if anything has been added to the original tenets of Halsted which have already been quoted. It is commonly held that proper use is essential if satisfactory results are to be obtained.

Silk is much less expensive than catgut. Still less expensive are the commercial forms which are suitable for most purposes.

Cotton is of vegetable origin—a cellulose. It is inexpensive, generally available and easily sterilized. It is pliable and knots securely. It is nonabsorbable. It produces possibly less tissue reaction than silk. Being less permeable, it is less likely to lead to sinus formation in the presence of infection. Dr. Ochsner⁽⁴⁾ of

New Orleans, has reported a large series of cases in which it was used with excellent results.

Alloy steel wire has lately obtained some popularity for certain uses^(1, 9). It produces practically no tissue reaction—it is impermeable, and does not lead to sinus formation. In the presence of infection, healing takes place without extrusion of the wire. In the abdominal wall and inguinal region, it causes no post-operative pain. It would appear that its chief use would be as a fascial suture in potentially infected wounds. It is used in sizes 30 to 36 gauge. The latter is the size of fine hair, has a tensile strength of 2½ pounds and is quoted as costing \$1 for 2 miles⁽¹⁾.

COMMENT

Where the operating facilities permit of a rigidly aseptic technic and the tenets of Halsted can be followed, there seems little doubt but that there are decided advantages in the use of silk in supposedly clean cases. In infected cases it is difficult to lay down rules—but it is the experience of the author that fine alloy steel wire is the material of choice for buried sutures in fascia and aponeurosis.

Conversely where there is doubt as to maintaining a sterile technic, and where the surgeon is accustomed to using mass ligature and continuous sutures, fine chromic catgut had better be used, except for small subcutaneous ligatures, where fine plain catgut is preferable.

SUMMARY

General considerations of suture materials have been presented. Catgut, silk, cotton, and alloy steel wire have been considered individually.

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Acute Infectious Mononucleosis

O. B. MAYER, M. D., COLUMBIA, S. C.

Acute Infectious Mononucleosis is not prevalent, but as cases are occurring at odd times a review of the subject is offered.

DEFINITION: Acute Infectious Mononucleosis is also known as glandular fever and benign lymphadenosis. It may be defined as a self-limited, nonfatal, acute infectious disease, causative agent unknown, characterized by fever and enlarged lymph glands and an absolute and relative increase of typical large monocytes.

HISTORICAL BACKGROUND: The first record of the disease is made by Filatow in 1885. He described the condition in a child and termed it "idiopathic lymphadenophy." In 1889 Pfeiffer described it as a clinical entity under the term "glandular fever." His cases were chiefly in children and blood changes were not noted. The first American cases were reported by West⁽¹⁾ in 1896. He described an epidemic involving 96 children in Ohio. Terflinger⁽²⁾ in 1908 reported 150 cases in adults. Thus he was the first to recognize that adults may be likewise affected. Burns⁽³⁾ in 1909 described the small mononuclear cells which were found present in the disease as high as 60 per cent. There was a lull in the literature then until 1920, when Sprunt and Evans⁽⁴⁾ described several cases of adults. They gave the name mononucleosis, which has been largely used since. In 1921 Tidy and Morley⁽⁵⁾ studied several cases during an epidemic and concluded that Pfeiffer's glandular fever and infectious mononucleosis were identical. In 1928 to 1930 the condition reached almost epidemic proportions through various parts of the world. In 1932 Paul and Bunnell⁽⁶⁾ reported the occurrence of a high titer of heterophile antibodies in the blood stream of persons ill

with the disease. This observation led to the heterophile antibody test for the disease.

OCCURRENCE: The disease is prevalent through various parts of the world, probably more in the temperate zones, with a few cases reported from the tropics. It appears in epidemic form more particularly in children and persons in institutions, but sporadic cases appear at any time. A very few cases are reported in negroes. Infants seem immune. The youngest child reported is about six months. Children are rather susceptible, as are young adults, particularly males.

ETIOLOGY: The cause is unknown, but clinically it appears to be an acute infectious disease. Many bacteria have been studied, especially those recovered from the nose and pharynx and ulcerated areas in these regions. Involved lymph glands and biopsy material have likewise been studied, but as yet no conclusive proof has been obtained. Vincent's organisms probably more than others have been suspected. Monkeys, guinea pigs, rabbits, and mice have been inoculated experimentally and a sickness produced like infectious mononucleosis, but the heterophile antibody test has been negative. There is record of a laboratory worker who accidentally pricked his finger with a contaminated knife and subsequently developed a proven case. Nyfeldt⁽⁷⁾ isolated an organism he named bacillus monocytagens hominis. When injected into dogs this produced a like disease. Later the same organism was recovered from the spinal fluid but study is still in process. Some workers have suspected a virus as the agent. A rapid spread of the disease is noted at times in several members of a class, who may on successive days be stricken with the sickness. L. van den Bergh

and Liessens⁽⁸⁾ reported inoculating monkeys with blood from a child with mononucleosis and producing characteristic syndromes. In another experiment virus isolated from blood through Seitz filter was injected into monkeys; one monkey developed the disease on the fifth passage and another on the tenth passage with positive heterophile tests. One monkey inoculated with defibrinated blood which had been kept at minus 15° Centigrade for 30 days showed characteristic blood changes attributed to the virus.

CLINICAL MANIFESTATIONS: The clinical manifestations are quite varied and no constant pattern is found in every case. The onset may be sudden or gradual over a few days; it may be so mild as to run an ambulatory course and pass unrecognized. There are general malaise, fever, headaches, perhaps a chill, sweating, anorexia, vomiting, and prostration out of proportion to the apparent sickness. The disease is always febrile and reaches its peak in about a week, with temperature from 100° to 103° in the afternoon and down by morning, gradual subsidence between the second and third weeks. The pulse usually parallels the temperature but may be slightly slow. Most patients have sore throat, although varied in character from generalized infection to localized follicular tonsilitis with ulceration of the membranes. Others have no throat symptoms. Lymph gland enlargement is most constant, particularly in the neck, and may appear before the fever, last eight to twelve days, and subside with the fever but may be palpable for weeks. Neck pains may be severe, accompanied by positive Kernig, Babinski, and sometimes stupor or coma. Occasionally lumbar puncture is done to rule out meningitis. An

increase in the lymphocytes may be found in the spinal fluid as high as 200 cells. Recovery in these patients is as good as in those without the spinal cord involvement. Again abdominal pain may lead to operation for an acute appendicitis; later mononucleosis is recognized. The abdominal pain apparently arises from involvement of the mesenteric lymph glands. The lymphadenitis may affect not only the posterior cervical and anterior cervical but may be general; occasionally the superficial glands are not involved, while the deeper glands of the mediastinal and mesenteric regions are affected. The glands are discrete and may vary in size from 1 to 2 cm., with nothing characteristic. The spleen is moderately enlarged in about half of the cases, the liver rarely. Occasionally jaundice is noted mildly during the second and third weeks. Skin eruption appears inconstantly, involving chiefly the trunk, with various forms of maculo-papular lesions, sometimes described as patchy morbilliform. It may be mistaken for a drug rash or acute exanthema.

CONVALESCENCE: The disease is self-limited, lasting two to three weeks; however, six months may elapse before the patient feels like himself again and the glands return to normal. Post-febrile depression is very marked in severe cases. Occasionally the fever may last six weeks or longer.

BLOOD PICTURE: The blood picture is rather typical but varies with phases of the illness. During the first few days there is usually a leukopenia or occasionally a slight leukocytosis, then the lymphocytes begin to show an absolute or a relative increase at the expense of the polymorphocytes. As the fever develops, the leukocytes increase to 20,000 and

Clinical Symptoms & Signs—(From a Table by John Paul)⁽⁹⁾

Early		1st and 2nd Weeks		Convalescent
Sore Throat	46%	Swollen glands	60%	Glands may remain large for weeks.
Malaise	38%			
Swollen glands	15%	Red throat	60%	Severe cases may leave patients feeling below par for months.
Chills	15%	Tonsillar patches		
Cough	15%	Stomatitis		
Eyes sore or pain behind eyes	12%			
Neck sore or stiff	12%	Petechiae on soft palate	10%	
Pain in shoulder	6%	Eyelids swollen	10%	
Pain in abdomen	6%	Jaundice	10%	
Fever and headache are constant.		Rash	10%	

occasionally as high as 50,000 and then gradually subside with the fever, as do the lymph glands. One of the most diagnostic findings is the type of circulating monocytes. They are typical, but not identical in every case. Kracke⁽¹⁰⁾ described them as large, atypical lymphocytic cells with irregular lobular nucleus with a type of sky-blue cytoplasm and a perinuclear clear zone. These cells also have a characteristic feature of various sized vacuoles in the cytoplasm and nucleus. The cells vary considerably in the same patient at different times and may account for from 90 to 50 per cent of the leukocytes. The cells are chiefly lymphoid in character and are more mature than those found in leukemia. The red blood corpuscles are usually not disturbed unless an associated anemia is present or the illness unusually prolonged, and the platelets are normal in number. There is no alteration in bleeding or clotting mechanism and the tourniquet test is negative.

HETEROPHILE ANTIBODY TEST: A positive heterophile antibody test is considered as the ultimate criterion for diagnosis in infectious mononucleosis. The test depends on a finding by Forssman. He observed: "Heterophile antibodies are normally found in man for sheep's red blood corpuscles in a titer 1:8." Paul and Bunnell⁽⁶⁾ accidentally found four patients with mononucleosis who had a titer in excess of 1:32. This observation led to the heterophile antibody test. The titer varies with the intensity of the disease. Though 1:32 is considered questionable, many observers insist on 1:64 as a minimum positive reaction. It may reach as high as 1:4096. The test is not specific, and may also be positive in low titer in serum sickness. For practical purposes, however, a high titer of agglutina-

tion is indicative of acute mononucleosis. The antibodies appear early in the disease but may be delayed and tests should be repeated at intervals as the disease progresses, much as is done in typhoid fever. The antibodies are present for an average of 56 days but may continue as long as 100 days. Their presence is not understood but it has been suggested that they develop as a response to extreme and quick reticular endothelial proliferation. These antibodies may give rise to false positive Wassermann and Kahn tests in 8 to 12 per cent of the cases, and tragic results may follow if this is not kept in mind. Finding a young patient with enlarged lymph glands, a sore throat, and a positive Wassermann, one is ordinarily justified in diagnosing syphilis, but in this disease repeated Wassermanns show a gradual diminution of the positive reaction, and a final negative reaction as the patient recovers.

DIFFERENTIAL DIAGNOSIS: Correct diagnosis may be difficult and temporarily impossible at certain phases of the illness. Careful clinical observations and especially laboratory studies are essential to distinguish it from diseases that may be more serious or require definite treatment. Frequently acute leukemia is confused with mononucleosis. There may be a high leukocytosis, immature white blood corpuscles, lymphadenopathy, and other misleading findings. But ordinarily there is no anemia or decrease in platelets as in leukemia. Agranulocytosis may come up for differentiation, especially during the phase of leukopenia. At times Vincent's angina, follicular tonsilitis, diphtheria, etc., may have to be considered. Hodgkins Disease, tuberculosis and other diseases that cause enlargement of the lymph glands may offer difficulty in dif-

False Wassermann Reactions—(From a Table by John Paul)

Days of Disease	WBC	Lymphocytes	Sheep Cell Agglutinin Titer	Kahn	Wassermann
13	6,050	49	1:512	4 plus	4 plus
18	4,500	21	1:4096	4 plus	4 plus
25			1:2048		
39			1:512	2 plus	4 plus
45	7,050		1:512	1 plus	negative
53			1:512	1 plus	2 plus
70			1:256	negative	
			1:256	negative	



ferentiation at times; a false positive Wassermann test may be very serious, and the importance of repeating tests at intervals must be stressed. The appearance of a rash may lead to confusion with acute exanthemata and drug eruptions. When the blood picture is not decisive, typhoid fever, undulant fever, malaria, and influenza sometimes are mistaken for mononucleosis, especially in cases of relapse, which are common. Acute mononucleosis may be correctly suspected by the clinical picture, but the diagnosis is established on the blood picture and a positive heterophile antibody test. The significant part of the blood picture is not the finding of a leukopenia or leukocytosis or an absolute or relative increase in monocytes but the presence of abnormal lymphocytes. Second, the diagnosis is confirmed by the positive heterophile antibody test, which is very reliable in high titer. The only confusing condition is with serum sickness in a low titer of agglutination. There are possibly many mild cases that pass undiagnosed except during times of epidemic proportions. In suspicious cases one should be more on the alert and have serial blood studies made every few days.

COURSE AND TREATMENT: The disease usually runs from two to three weeks, mild cases only a week, and severe ones may be febrile as long as a month. There are ordinarily no complications and recovery is usually complete, but during the convalescent period prostration and weakness may continue for a long time. The antibodies may be found in the blood for from two to six months. There is no specific treatment, only symptomatic. The patient should be in bed and nursed as during an acute infectious disease, remembering that isolation is a necessary precaution, that spreads do take place at times, that blood transfusions

from convalescent patients have been of no particular benefit, and that sulfanilimide and other medications have not shown material benefit.

SUMMARY: Acute Infectious Mononucleosis is caused by an unknown agent that occurs in sporadic and epidemic form. The clinical manifestations and blood picture are variable and for this reason it is mistaken frequently for other diseases. Careful clinical and repeated laboratory studies are often necessary for correct diagnosis. False positive Wassermann and Kahn reactions are encountered in a small per cent of the cases. No doubt many cases, particularly mild forms, pass unrecognized.

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TRUSTEES FOR THE MEDICAL COLLEGE ELECTED

At a meeting of the Legislature on February 5th, five Trustees were elected for the Medical College. Dr. Thomas A. Pitts of Columbia, Dr. Thomas H. Hope of Newberry and Dr. John H. Porter of Andrews were reelected to the Medical College Board, while Dr. L. M. Stokes of Walterboro and Dr. S. C. Hodges of Greenwood were named to

succeed the late Dr. L. H. Jennings of Columbia and the late Dr. O. A. Matthews of Bennettsville, respectively.

The Army Medical Reserve Corps has called to service, Dr. James F. Dusenberry, Laurens; Dr. Chapman J. Milling, Columbia; and Dr. Everett B. Poole, Greenville.

A Sketch of the Life of J.L.E.W. Shecut

ROBERT WILSON, M. D., CHARLESTON, S. C.

The wave of religious persecution in France which swept so many Huguenot families into other countries, carried the forebears of the subject of this paper into Switzerland, whence in 1768-9 his parents, Abraham and Marie Barbary Shecut, shortly after their marriage, removed to Beaufort, S. C. Here on December 4, 1770 was born the son, who was given the name of John Linnaeus Edward Whitridge. In 1779 the family removed to Charleston, then called Charlestown, where the boy grew to manhood and lived until his death, June 1, 1836. Of his boyhood and early education, there is no record, the family papers and documents having been burned during the War Between the States, but he studied medicine under the preceptorship of Dr. David Ramsay and later at the University of Pennsylvania. He did not graduate, but at the age of twenty-one, returned to Charleston and began the practice of medicine, which he continued until his death. His failure to have the degree of M. D. probably explains why his name does not appear upon the roll of the Medical Society, which otherwise would be singular, in view of the breadth of his scientific and literary interests and activities. Like so many others of our early practitioners of medicine, Dr. Shecut's scientific tastes turned to botany, and in 1806, he published in two volumes, "The Flora Carolinaensis, or a Historical, Medical, and Economical Display of Vegetable Kingdom according to the Linnaean or Sexual System of Botany," which was printed by John Hoff, No. 6 Broad Street. Wilson Gee says that "This was the most extensive work on the botany of the state published up to that time." In referring to this work, Shecut tells us that it was compiled and published "in honor of his native state." It would seem that this work was never completed, for he says in his *Historical and Literary Sketch of Charleston*, "This work was honored with a numerous patronage and was continued to the completion of a volume of seven numbers; at which he was compelled to relinquish the under-

taking, with the loss of twenty months close devotion to its progress and also of \$1,800 and upwards." The plan of the book involved an exposition of the Linnaean system, tables showing the medicinal virtues of plants "under proper classes, considered in a medical point of view, systematically arranged," an alphabetical arrangement of plants under several heads showing order, genus, and species, parts used in medicine, domestic uses, poisonous properties, etc. "The work in its present form embraces as much as it is possible the nature of a Vegetable *Materia Medica* and complete *Botanic Dictionary*, and is adapted to every class of citizens. The first part of the work was commenced in 1794 "under the title of Pacosmography, derived from the initials of Physic, Anatomy, Chemistry, Osteology, Surgery, Midwifery, and *graphy* a description; which had led to the introduction of the present work." In which we catch a glimpse of the author's whimsical turn of mind.

The list of subscribers contains many familiar names, some of whom are Dr. Alexander Baron, Dr. Matthew Irvine, Dr. Samuel H. Flagg, Dr. Alexander Garden, Dr. Joseph Johnson, Dr. James Lynah, Dr. James Moultrie, Dr. Philip G. Prioleau, Dr. David Ramsay, Dr. Samuel Wilson and Dr. Robert Wilson, Jr.

In 1819 he published a volume entitled "Medical and Philosophical Essays." The contents included four essays: 1st. Topographical. Historical and other Sketches of the City of Charleston, from its first settlement to the present period. 2nd. An Essay on the Prevailing Fever of 1817. The Second Edition with improvements. 3rd. An Essay on Contagions and Infections (second edition improved). 4th. An Essay on the Principles and Properties of the Electric Fluid. These essays were intended to constitute a logical sequence, the purpose of which is to prove that yellow fever is caused by electrical variations of the atmosphere. In order to prove this theory, an exhaustive study of the environmental condi-

tions of a locality in which yellow fever develops both in epidemic and non-epidemic periods, and a general description of contagions and infections in general were considered necessary, hence the three essays which precede the final one, in which the principles and properties of the electric fluid are set forth. In these essays, much of local interest is to be found, geographical, personal and topographical and curious notions of disease which were more or less prevalent. Among the noteworthy historical incidents recorded is the founding of the Medical Society, the zeal of whose members for "the promotion of science was soon evidenced by the formation of three auxiliary institutions: The Humane Society, the Charleston Dispensary for the Poor, and the Botanic Garden"—The Botanic Society, which also emanated from the Medical Society, was founded in 1805 and was incorporated in the same year. This was the immediate organization through which the Botanic Garden was established. It lived only a few years and its passing was a great disappointment to Shecut.

"Notwithstanding all the advantages and delights, that this most pleasing and instructive science offered to the citizens, in the adoption of the plan for its establishment; notwithstanding an annual sum of \$1175, this obtained from voluntary subscribers, added to what the Medical Society and Mrs. Turpin had done for it; and although 'the garden was opened the same year, under the most favorable auspices,' and enriched with a considerable number of valuable indigenous and exotic plants, it flourished for a few years beyond the most sanguine expectations of its friends, 'it has fallen!'"

A second attempt was made to "effect a more extensive, and at the same time more permanent establishment," but it too failed.

Shecut continued to hope against hope. "And let us, even yet," he writes, "cherish the hope, that the legislators of the state, convinced of the utility and national policy of patronizing the arts and sciences throughout the state, will shortly add to the list of their acts, one, for the appropriation of means adequate to the successful promotion of this laudable and essential useful object."

In 1809 an attempt was made to establish

a Philosophical Society in Charleston, and apparently an auspicious beginning was made under the Presidency of Charles Dewar Simons. In a short time, however, Mr. Simons was elected to the professorship of Chemistry in the South Carolina College at Columbia, and the Philosophical Society died with his removal from Charleston.

This effort probably suggested to Shecut the organization of a society called the Anti-quarian Society of Charleston, which was accomplished in 1813. "The objects of this society were to be, *primarily*, the collection, arrangement and preservation of specimens in natural history; and of things rare, antique, curious and useful; and, *secondly*, the promotion and encouragement of the arts, sciences and literature generally."

The original members of this society were Doctors Richard L. Lathan, John L. E. W. Shecut, Isaac A. Johnson, John S. Trescott, and John Grimke. These were joined a month later by Doctor James E. B. Finley, Stephen Elliott, Dr. David Ramsay, the Honorable John Drayton, the Honorable Thomas Bennett, Benjamin Elliott, and Dr. Alexander de Carandepez.

The name of the Society was changed a little later to The Literary and Philosophical Society of South Carolina, by which name it was incorporated in 1814.

"The surprising progress of this society," writes Shecut "is a guarantee, that the citizens of Charleston are awakening from their slumber, to the active promotion of science and literature;" a progress which he thinks only to be expected from the happy and fortunate selection of Stephen Elliott as president. Specimens soon began to come in for the formation of a museum and the Charleston Library Society presented "the cases and collections" of which it was the custodian, so that in a short time, says Shecut, "it began to assume a respectable and very flattering appearance." The Literary and Philosophical Society organized by Shecut thus became an important factor in the development of the Charleston Museum. About this time, Dr. Felix l'Herminier, a distinguished naturalist and chemist, arrived from Guadaloupe with an extensive collection "the fruit of twenty years application, expense

and industry." This collection was offered to the society and fortunately a sufficient sum was raised for its purchase. It is pleasant to record that "The State Legislature and the City Council, alive to the importance of this object, with a promptness and liberality, which will forever redound to their credit, contributed largely towards the purchase" of the collection, which, he adds "is now (1819) one of the chief, and perhaps, most interesting ornaments of the city."

Reverting to the subject of yellow fever, Shecut says "that from its first appearance in this city to the present day, it has never been found to be contagious, as has been sufficiently testified by almost all the Faculty of Physic of the former and present period, with the exception of one writer." Yellow fever is the result of two factors, a *specific gaseous poison*, which is produced by a reduction of electric fluid in the air, and predisposition; the degree of predisposition determining whether it shall be the common billious remittant fever or Yellow Fever. The fact which puzzled so many observers that yellow fever is essentially a city and not a country disease, furnishes Shecut with "incontestable proof" that the gaseous poisons are generated by a combination of marsh miasmata and animal effluvia.

But if his logic fails to give him the clear vision of a Lining, he could at any rate draw accurate conclusions from his therapeutic failures, for he tells us that his experience had bid him sheath his lancet and along with the lancet to reject mercury "except as an auxiliary ingredient, to a limited extent," for he has learned "from fatal experience, that it is at best, a dangerous remedy."

Mercury is recommended in this "limited extent" in the early stages only. Treatment is begun by attempting to produce vomiting by the administration every 15 or 20 minutes of a wineglass of a solution of Rochelle or Epsom salts, 2 ounces, and Tartar Emetic, 3 or 4 grains, in a half pint of warm water. This is followed by "copious draught of strained gruel, saturated with salt, and if the first prescription does not operate downwards, so as to produce from five to ten motions, according to the strength and constitution of the patient,

the following is ordered: Jalap, half a drachm; Calomel, ten grains—mix and divide in five papers. One to be taken every hour in molasses, until the requisite number of stools are produced. . . . After this, and especially if the skin be hot and dry, the patient is either placed in a tepid bath, or is sponged all over with cold water, or cold vinegar and water, for the space of five or ten minutes, or until the skin assumes the appearance of goose skin; then put between flannel or cotton coverlits, in which situation, a free and plentiful perspiration is elicited and encouraged by warm drinks of barley water, warm lemonade, sage, rosemary or life-everlasting teas (*gnaphalium*). And thus ends the first twenty-four hours."

If it was customary to follow this vigorous beginning, as is intimated, with the lancet or with further mercurialization or with both, one can well believe that the unfortunate patients would pray that they might fall into the hands of the gentle and conservative Dr. Shecut.

In the essay on Contagions and Infections, the prevailing conceptions of the origin of diseases is discussed. One paragraph may be interesting:

"There is yet another disease, which does not come properly within the definition of either of the laws of generation or communication heretofore noticed; — it is, notwithstanding, evidently produced by an infection of a very specific character, and as such established a fourth class in the genera of infections. This disease has been termed by some writers, *catarrhus contagiosa*, and by others *catarrhus epidemica*; it is undoubtedly, the widest spreading epidemic ever known; for as Drs. Cullen and Rush have observed, 'it has seldom appeared in any part of a country, without appearing, successively, in every different part of it. Indeed, it has extended itself from Europe to America, North and South, including the Western Isles; and it is believed, that in the years 1789 and 1807, its influence was felt all over the whole world.'"

"It is said also to be a disease *sui-generis*, and is capable of blending itself along with almost every previously existing state of disease, which thence assumes various types and modifications, being at one time a *synocha*, at another a *synochus*, and at others a *typhus*; 'It very readily passes,' says Dr. Cullen, 'into *pneumonia*, *peripneumonia* and *phthisis*,' and hence we may account for its being at one time a *typhoide pneumonia*, or cold plague, as it has been called; at another *malignant pleurisy*; sometimes a *febris rheumatica*, or true rheumatic fever; sometimes a *typhus petechialis*, or spotted fever at

others a head pleurisy, and at other times in its original form, that of the influenza, or *catarrhus epidemica*."

In a footnote the opinions of Dr. Hosack, Dr. Bardsley of the Manchester Infirmary, and Mr. Tomlinson are quoted; all of whom regard the epidemic catarrhal fever as contagious.

The final essay deals with the properties of the electric fluid and its application to the treatment of disease. It is needless to enter into the author's fantastic notions and his efforts to explain so many phenomena by the presence or absence of this mysterious fluid. This paragraph is illustrative:

"Common fire is derived from the universal or electric fire, and hence, there is in ardent spirits a proportion of this *etherial fluid*, which is termed alcohol. May this not account for the effects produced by ardent spirits and other *stimuli* in nervous persons, or such as have their sensibility and irritability more acute, and consequently their excitability more easily acted upon than others?"

But assuredly it is to his credit that he was one of the earliest to appreciate the possibility of electricity in therapeutics and to make an honest effort to employ it, as he thought, rationally. He employed electricity in a wide range of diseases, in fevers, palsies, chronic rheumatisms, epilepsies, tetanus, hypochondriacal and hysterical complaints, hydrophobia and melancholy, amenorrhea and dysmenorrhea, chlorosis, nervous headaches, etc.

The interests and activities of this versatile man were not confined to scientific pursuits and to medical practice. After his death, the manuscripts of two novels were found among his papers. One of these, entitled "Ish-Noo-Ju-Lub-Sche or The Eagle of the Mohawks, a Tale of the Seventeenth Century," was published in 1841, five years later. The dedication, written in 1825, reads: "To the honored and truly respected descendants of the venerated Knickerbockers, or primitive settlers of Der Nieu Nederlandts' (New York), this work, designed to transmit to posterity the integrity, virtue, and patriotism, of those illustrious personages, is most respectfully inscribed, by their admiring friend and fellow citizen,

The Author"

And we learn from the publisher's note that this tale was "the commencement of a series

of Historical Tales, on the subject of which it treats," and further, that the author was "a writer of acknowledged reputation, and who was quite favorably known among believers in the Final Reconciliation, from several pamphlets of importance which he published some years since."

The second novel bore the title of "The Scout, or the Fast of St. Nicholas—A Tale of the Seventeenth Century" and was published in 1844. The editor's note tells us that it "may properly be regarded as a sequel to the highly interesting little work Ish-Noo-Ju-Lub-Sche, or the Eagle of the Mohawks." Both of these books are Indian romances. Not satisfied with science, medicine and literature, our author dabbled in theology and wrote "Strictures on Dr. Adam Clarke's Commentary," which was preceded, says Miss Willis, by a critical review of his extravagant comment on Matthew 25:46 (1832). From the reference to his pamphlets on the doctrine of Final Reconciliation, we are prepared to encounter a trend toward theology.

Apparently dissatisfied with the various sects of the Christian church, he undertook a revision of the Episcopal Book of Common Prayer, with a view of adapting it to the ritual service of a new religious organization. The establishment of this new church seems to have been undertaken with the cooperation of the Library Society of Charleston, for he writes "whereas the body corporate of the Trinitarian Universalists and Library Society of Charleston," with the desire of constituting a church from among their members, did on Sunday, the 13th day of February, in the year of our Lord one thousand eight hundred and thirty-one under the Episcopal charge of their Bishop-elect, the Rev. Paul Dean, of Boston, make a public profession of their faith, etc." "The Episcopal Church of Trinitarian Universalists in Charleston" seems to have had a short and unsuccessful life, for its founder became allied with the Methodist Church and was buried in Bethel Churchyard.

One other public activity remains to be mentioned. Toward the end of the first decade of the century, the use of homespun, according to August Kohn, became so popular that in 1808, the House of Representatives passed a

resolution that all members of the General Assembly wear homespun suits during the session. In this same year, the South Carolina Homespun Company of Charleston was organized by a group of men of whom Dr. Shecut seems to have been the moving spirit. The company was organized with a capital stock of \$30,000 and Dr. Shecut was elected president. Two years later, the General Assembly authorized a lottery to be conducted to raise money for the completion of the plant, "provided there shall not be raised by means of this lottery, a sum exceeding \$18,000." Thus began the cotton mill industry in South Carolina and as August Kohn says, "Credit is due to the men who withstood general opposition and invested their money in this initial plant in Charleston. The plant was located at the foot of Wentworth Street, on the Ashley River, and later became the property of the Barton Lumber Company. On the northwest corner of the building was this inscription:

This stone was laid on Monday
24th October, 1808

by

Dr. John L. E. Shecut, President
and

Jonathan Lucas—Col. Daniel Stevens

John Johnson, Jr.—C. B. Cochran

Thos. Bennett, Jr.—Major Robert Howard

John Horlbeck, Jr.—Dr. Joseph Kirkland
Directors

PREVENTION OF WAR WOUNDS

Since the majority of wounds in present day warfare, especially from bombing, are caused by the predominant low velocity missile, more widespread use of protecting armor is indicated. The steel helmet has already proved its usefulness. Many chest and abdominal wounds may be prevented by the use of some form of light weight body armor. Collier and Farris, Surg. Gyn. & Obs. 72:15, (Jan.) 1941.

OPERATING FOR JAUNDICE

Actual statistics on the duration of jaundice from onset to beginning resolution show that a period of observation of at least a month (rather than one or two weeks) is necessary to rule out hepatitis with any degree of certainty. Hepatitis, often called catarrhal jaundice, is a non-surgical condition, and exploration not only serves no useful purpose but may harm the patient. Bloomfield, A. L., Surgery 9:61, (Jan.) 1941.

Dr. Shecut was so enthusiastic over this enterprise that he named a daughter Homespun.

Such was Dr. Shecut. A man of action in medicine, science, literature, theology and business. We may smile at his vagaries; we may feel that he did not possess the logical faculty and critical acumen of some of his contemporaries; but we must honor him as man of unflagging energy, who cherished an ambition to raise the level of culture in his community, as well as to render practical service to his city and state. His reputation reached the center of scientific culture of his day where his work was esteemed, as the following notice from the Charleston Courier, August 29, 1827, bears witness:

"Dr. Shecut, of this city, we understand, had the Diploma of the Associate of the Linnæan Society of Paris conferred upon him at Paris, on the 20th of May. This honor, we believe, has as yet been conferred only upon two individuals in this State."

Dr. Shecut was also the author of: "A Treatise on Climatic Conditions in South Carolina," and "The Elements of Natural Philosophy and a New Theory of the Earth."

If possible, it would be better never to tell a person that his blood pressure was high. Lives have been made miserable by a few words, "Your blood pressure is 170." We entirely agree with Dr. Cabot that physicians should always tell the truth to their patients, but as nearly as possible let us have if not the whole truth which is a big order, at least the *fair* truth. It is no uncommon experience to have a patient say, "I need something for my blood pressure—it is high." "How high?" "Well, Dr. so-and-so said it was high—140." That is not the *fair* truth. We believe the recital of the mathematics of blood pressure is a bad practice. Patients may be told, "Your pressure is *normal*," or "it is satisfactory," or it is "about the same as it was."

Method of Treatment
Clendening & Hashinger.

Many cases of pancreatitis are caused by vascular occlusion and probably infection rather than by primary duct obstruction. Lynch, K. M., Ann. Int. Med. 14:628, 1940.

AN INTRODUCTION TO NEW MEMBERS

Recently, the Association has been enriched by the following members:

Dr. Vance Wells Brabham, Jr. has joined the Williamsburg County Medical Society. Born in 1911, in Cope, Orangeburg County, S. C., he graduated from the Medical College of the State of South Carolina in 1935. Interned at Roper Hospital 1935-1936. House doctor at Pittman Hospital, Fayetteville, N. C. 1936-1937. Assistant resident surgeon Roper Hospital 1937-1938 and resident surgeon 1938-1939. Practiced general surgery in association with Dr. L. M. McMillan in Mullins and then spent several months in the Veteran's Hospital at Hampton, Va. Made Junior Candidate of the American College of Surgeons in 1940. Now doing general surgery in association with Dr. E. T. Kelley of Kingstree. Published "The Treatment of Tetanus" in the Journal of the South Carolina Medical Association, May, 1939.

Dr. George R. Dawson has recently joined the Charleston County Society. He graduated from The Citadel in 1929 and from the Medical College of South Carolina in 1933. Intern at Roper Hospital and Resident in Surgery 1933-35. During 1935-36 was on active duty in the Medical Reserve Corps. In 1936-37, House Officer, Orthopedic Service, Johns Hopkins Hospital. In 1937-38, Teaching Fellow in Surgery, Medical College of South Carolina and Senior Resident in Surgery, Roper Hospital. 1938-40,

Resident, New York Orthopedic Dispensary and Hospital. Is now practicing orthopedics in Charleston.

Dr. R. E. Livingston of Fountain Inn has recently become a member of the Greenville Medical Society. He was born in Kinards, (Newberry County), S. C., in 1913. In 1935, he received his B. S. degree from the University of South Carolina, where he was a member of A. E. D. Pre-medical Fraternity. In 1939, he received his degree from the Medical College of the State of South Carolina, where he was a member of the Phi Chi Medical Fraternity. Interned at the Greenville General Hospital from July, 1939 until July, 1940. From that time until November, 1940, he was resident at the Greenville General Hospital and is now in general practice in Fountain Inn.

Dr. Paul P. Hearn, born in Eatonton, Ga., has recently become a member of the Greenville County Medical Society and of the Staffs of the Greenville General Hospital and St. Francis Hospital. Dr. Hearn received his B. S. degree at Mercer University in 1932 and his M. D. degree at the University of Georgia School of Medicine in 1936. General rotating internship, U. S. Marine Hospital, San Francisco, 1936-37. Two-year house residency with didactic lectures in Otolaryngology, Barnes Hospital and Washington University Clinics, St. Louis, 1937-39. One-year appointment in Ophthalmology, same location, 1939-40. He has started practice specializing in Eye, Ear, Nose and Throat diseases.

Dr. Edwards A. Park of the Johns Hopkins Hospital will address the Charleston County Medical Society on April 8th on some subject of pediatric interest.

The 43rd annual meeting of the Tri-State Medical Association of the Carolinas and Virginia was held in Greensboro, N. C., February 24th-25th. Dr. G. R. Wilkinson of Greenville is one of the vice presidents of this association and Drs. J. R. Young of Anderson, W. H. Prioleau of Charleston and R. P. Finney of Spartanburg are councillors.

There were a number of papers by South Carolinians. Dr. I. G. Linton read a paper on "Post-operative Distention." Dr. E. A. Hines of the Mayo Clinic gave a clinic on "Conditions of High Blood Pressure." Dr. G. R. Wilkinson gave a report of a case of "Lipodystrophia Progressiva." Dr. W. H. Prioleau presented a discussion of "A Consideration of Clean Wound Healing."

Dr. William W. Painter of Spartanburg has been called to active duty in the Army.

At the January meeting of the Columbia Society, Dr. M. G. Peterman delivered an address on "Convulsions in Childhood."

Plans are being made to hold the South Carolina Pediatric Society meeting in the early part of May. Dr. Campbell Goodwin of Johns Hopkins will be the principal speaker. Other items of the program will be announced later.

A meeting of the Coastal Medical Society was held in Summerville on February 20th. Dr. F. E. Kredel of Charleston spoke on "Thermal Trauma in Treatment." and Dr. J. I. Waring, also of Charleston, spoke on "Upper Respiratory Infections in Children." After the meeting, a supper was served at the Squirrel Inn.



Remodeling and New Construction at the Medical College of the State of South Carolina

On May 1st, 1940, at the dedication of the Alumni Memorial Clinic and the large building on the east lot line of the College grounds, Dean Wilson announced the anonymous gift of \$125,000.00 for further improvements.

Immediately plans were made for remodeling the old buildings, acquiring the lots on Calhoun Street between the Food Research building and the Library, and constructing thereon a modest auditorium.

College Grounds

Because of necessary court action, it took eight months to come into possession of the two houses and lots on Calhoun Street.

Now the Medical College owns an approximately square block, 272 x 288 feet. Two years ago the construction of a quadrangle—a complete line of connecting buildings, with continuous corridors running through their longitudinal centers—was favored.

This vision is being translated into reality, as the accompanying plot-plan clearly indicates—the only break remaining being the south-east corner, where now a temporary building used by Food Research stands. It is hoped that

in the near future funds may be obtained to complete the quadrangle and provide additional space on the first floor, already sorely needed for dispensary purposes.

Remodeling

The alterations in the old main building on Lucas Street and also in the structure on Mill Street, that they might become an integral part of our construction program, were vigorously pursued through the summer months of 1940, interfering only slightly with the work and teaching of the departments involved.

On the first floor of the main building extensive changes have been made in the administration offices of the Dean and the Registrar, and in the quarters assigned to Clinical Pathology. The old assembly room has been divided into two lecture rooms and store rooms.

The second floor is occupied by the Department of Bacteriology and four of the rooms on the south side by Pathology.

The third floor is wholly devoted to Biochemistry.

The first floor of the old building on Mill

Street has been turned into dispensary cubicles.

The second floor provides commodious additional housing for the clinical men, plus a small amphitheater, and a laboratory for nurses and pharmacy students.

The third floor is given over to surgical technique. Over the onetime dog roof a new, large, well-lighted story has been especially designed for a laboratory conjointly and sequentially to be used by Physiology and Pharmacology.

New Construction

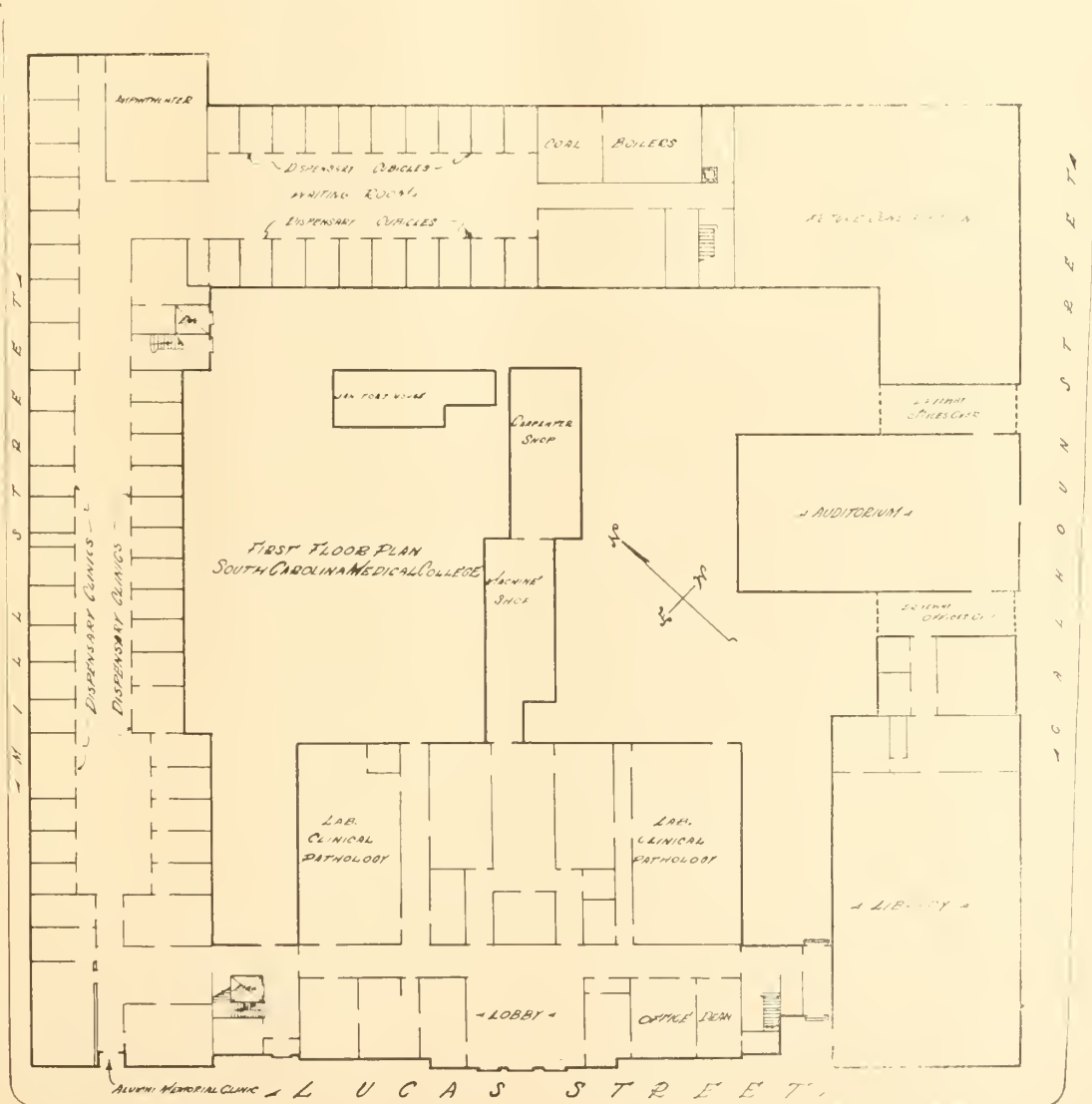
New construction will be a two story wing, 37 x 40 feet, adjacent to the library. The first floor is set aside for Faculty meetings, also serving as a reading room, and two other rooms for the library of the Medical Society of South Carolina and a Faculty study cubicle.

The second floor will be occupied by the Department of Pathology.

The new auditorium, separated on the first floor from the wing by a driveway, and on the second floor, continuous with Pathology, will front on Calhoun Street 44 feet and extend to the rear 78 feet. Its ground floor seating capacity will be over 300, on a grade of 3.5 feet, sloping down to the stage.

The balcony, seating about 120, will have a corridor to connect the wing with future construction, if and when the quadrangle is completed.

Plot-plan and floor-plans visualize the housings of most of the departments, and the ugly gap on the southeast corner, 110 x 85 feet, that cries aloud for new funds to complete the plant in the near future.



THE JOURNAL

OF THE

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Original manuscripts, subject to approval by the Editor and the Departmental Editors, are desired for publication in the Journal. They should be typewritten, double spaced, on 8½ x 11 paper. References should be complete, and only such as relate directly to statements quoted in the paper. Illustrations will be used as funds permit, or as authors are willing to bear the necessary increase in cost. Short original articles are preferred to long reviews. Reports of Society meetings and news items are desired.

OFFICE OF PUBLICATION

Medical Building ----- Seneca, S. C.
 Subscription Price ----- \$3.00 Per Year

MARCH, 1941

EARLY TEACHING IN SOUTH CAROLINA

Last year an article on early Southern medical schools appeared in the Journal of the Association of American Medical Colleges and stressed the scarcity of clinical teaching, the brevity of the sessions, and the repetition of the lectures. Dr. Robert Wilson comes to the defense of our own Medical College, with a clipping from the Charleston Courier of September 3, 1840, in which is described the establishment of "College Hospital, West end of Broad Street (formerly the old Theatre)—instituted by the Faculty of the Medical College, for the purpose of furnishing instruction at the bedside of the sick, for Medical Students and the Annual Classes." Commenting on this clipping, Dr. W. C. Davison, the author of the article mentioned, says, "It is one of the earliest, if not the earliest, instance in which a faculty of a medical college established a teaching hospital, instead of the reverse, which is the more usual situation."

South Carolina can again lay claim to a "first," this time in medical education.

SULFANILYLGUANIDINE

The list of sulfonamid compounds continues to grow at a rate which will soon rival the

vitamin alphabet. Among the newer derivatives, sulfanilylguanidine has come into prominence with the promise of tremendous beneficial effects in two particular respects. It is a relatively non-toxic substance, which has definite selective action on the colon group of bacteria and has been used with almost specific effect in the bacillary dysenteries. In these conditions, it has given excellent results. On typhoid fever, it seems to have no effect. Its other important value is its use in intestinal surgery, where its ability to practically sterilize the intestine is capitalized with marked success. The drug has little of the nauseating effect of its related compounds and produces no ill-effect on the kidneys, although crystals may frequently be found in the urine. Sulfanilylguanidine has been used fairly extensively at the Johns Hopkins Hospital and elsewhere. Its surgical application has been highly valued, though there is some question whether some similar related compound may not prove even more effective. Unfortunately, it is not yet readily available, being obtainable only for experimental use. Perhaps before long, it will be marketed in time for the season of intestinal infections. Results with sulfathiazole, an easily obtained compound, have been reported

as excellent in dysentery, though the results with the newer compound are said to be even better.

Several of the county societies have passed resolutions that the dues of such of their members as are called into military or naval service be carried by the societies. This was customary in some of the societies during the last great war and very likely the custom will be extended rather generally. The Greenville County Society and the Charleston County Society have already taken official action on this matter and it is likely that others have done so, though, so far, no official announcement has been made.

HONORS TO SOUTH CAROLINIANS

The January 1941 issue of *THE AMERICAN JOURNAL OF PUBLIC HEALTH* includes a series of tributes to Dr. Mazyck P. Ravenel, native South Carolinian, notable in the field of public health, and for the past sixteen years active as Editor and Editor-in-Chief of that journal.

Dr. Ravenel was born at Pendleton and was first-honor graduate at our own Medical College in 1884 and later taught there and practised medicine in Charleston, afterward pursuing successfully scientific work and teaching in other places.

A sketch of Dr. Ravenel's progenitors by Dr. Robert Wilson leads the collection, which expresses hearty appreciation by men who are leaders in their field of public health. Dr. Ravenel's tilt with Prof. Robert Koch on the question of bovine tuberculosis is recalled, and his many fruitful activities in developing his *JOURNAL* are recounted. Dr. Ravenel continues his connection with the *JOURNAL* as Editor-emeritus. A bibliography of his 114 scientific articles and books is appended to the article.

Into Dr. Ravenel's place comes another South Carolinian, who has made for himself a fine name in public Health. Dr. Harry S. Mustard of Charleston, now Director of the DeLamar Institute of Public Health of Columbia University, takes over the Editor's chair, a place to which his record as a capable practitioner, a practical public health executive, a successful teacher, a well-accepted author, and a man

of eminently pleasing personality and character well entitle him. We feel sure that *THE AMERICAN JOURNAL OF PUBLIC HEALTH* has passed safely from one South Carolinian's guidance to another's, and this *JOURNAL* has for it every hearty good wish for a flourishing career under Dr. Mustard's direction.

CORRESPONDENCE:

Branchville, S. C.
February 12, 1941

Dr. Julian P. Price, Sec.
S. C. Medical Association
Florence, S. C.

Dear Dr. Price:

Being in a town of 1600 people and without any resident physician, we are at the point now that we are compelled to have the aid and assistance of yourself and the S. C. Medical Association, in order that we may progress and live normally, as all free and civilized people should do. After writing the American Medical Association, I was referred to you, with the idea that you would be in a position to help us get a doctor.

If you would like to have us come over and see you, we would be delighted, for we are in critical circumstances without a doctor. We would offer a good young doctor much in cooperation, assistance and any facility within our power to submit.

Please help us at once, by giving us your kind indulgence in this matter.

Yours truly

HYMIE NUSSBAUM
Pres. Young Men's Business
League, Branchville, S. C.

The following thoughts were inspired by reading in the *SOUTHERN MEDICAL JOURNAL*, February, 1941, an article entitled—"Pot Liquor: A Neglected Source of Vitamin C for the Feeding of Infants." By M. L. Keller and A. S. Minot.

O thump the drum and whack the pot
And stir and brew up thicker.
And sip again the virtues new
Of good old stout pot liquor.

Our mammies knew the way we grew
Was due to careful eating,
And filled our bowls with pap and shoals
Of liquor rich and heating.

Now shines the light of science on
A good old Southern custom,
Of filling infant bellies full
Of vitamins—fit to bust 'em.

Now boil your cabbage, peas, and beans,
And quaff this fine specific,
Then thank your stars no blemish mars
This dish most scientific.

PRELIMINARY PROGRAM OF THE
ANNUAL MEETING
TUESDAY, APRIL 15 — MEETING OF
HOUSE OF DELEGATES AND MEET-
ING OF COUNCIL

WEDNESDAY, APRIL 16, 9:00 A. M.

SCIENTIFIC PROGRAM

BALL ROOM POINSETT HOTEL

Welcome by the President of the Greenville County Medical Society.

Response by the President of the S. C. Medical Association.

(Papers limited to twenty minutes, five of which may be used in closing discussion. Discussions limited to five minutes. Time will be called by the President.)

Report of Committee on Necrology, Dr. Jas. R. desPortes, Chairman.

1. Arthritis of the Cervical Vertebrae.

Dr. Olin B. Chamberlain, Charleston.

Discussion opened by Dr. J. Warren White, Greenville.

2. A Composite Operation for the Radical Cure of Inguinal Hernia. (Illustrations).

By Dr. LeGrand Guerry and Dr. George McCutchen both of Columbia.

3. Sudden Death From Natural Causes.

Dr. E. B. Saye, Spartanburg.

Discussion opened by Dr. T. R. W. Wilson, Greenville and Dr. Kenneth Lynch, Charleston.

WEDNESDAY 11:00 A. M.

President's Address—Dr. W. L. Pressly, Due West.

Address—Dr. Frank H. Leahy, Boston, Mass.

4. Hypertension: Experimental and Clinical Observations.

Dr. John F. Rainey, Anderson.

Discussion opened by Dr. Hugh Smith and Dr. George R. Wilkinson both of Greenville.

5. Diagnostic and Therapeutic Value of the Lumbar-Puncture and Cerebrospinal Fluid Examination.

Dr. Sol B. McLendon, S. C. State Hospital.

Discussion opened by Dr. Ben N. Miller and Dr. E. W. Long both of Columbia.

WEDNESDAY 2:30 P. M.

Round Table Discussion.

Common Skin Diseases. Discussion led by Dr. A. B. Cannon, New York City.

WEDNESDAY 4:00 P. M.

Pitfalls in Fractures. Chairman Dr. A. T. Moore, Columbia.

Discussion led by Dr. O. L. Miller, Charlotte, N. C.

THURSDAY 9:00 A. M.

BALL ROOM POINSETT HOTEL

1. The Surgical Treatment of Bronchiectasis (Motion Pictures).

Dr. F. P. Coleman, Columbia.

Discussion opened by Dr. Rudolph Farmer, State Park and Dr. W. Atmar Smith, Charleston.

2. Complications Connected with the Treatment of Varicose Veins.

Dr. Wm. H. Prioleau, Charleston.

Discussion opened by Dr. W. C. Hunsucker, Bennettsville.

3. Some Considerations Regarding Constipation.

Dr. J. W. Kitchin, Liberty.

4. The National Physicians Committee.

Dr. Wm. Weston, Jr., Columbia.

Discussion opened by Dr. L. M. Stokes, Walterboro.

5. Low Back Pain and Sciatica Caused by Faulty Mechanics at the Lumbo-sacral Area.

Dr. George R. Dawson, Charleston.

Discussion opened by Dr. W. A. Boyd, Columbia.

Address—Dr. David T. Smith, Duke University. Subacute and Chronic Non-Tuberculous Lung Infections.

Further details of the April meeting will appear in the April issue of the Journal.

Dr. M. N. Smith-Peterson addressed the January meeting of the Greenville County Medical Society on the subject "Arthroplasty of the Hip."

PEDIATRICS

R. M. POLLITZER, M.D., GREENVILLE, S. C.

ADEQUATE MEDICAL CARE FOR THE INFANT

These days we hear much about adequate medical care. There is quite a difference of opinion as to whether our citizens do or do not receive this. Further, we of the profession, believe that with the vast amount of free service available, the lack, if there be such, cannot properly be attributed to the doctors. However, it might be well to state what today constitutes adequate care during the first two years.

Shortly after birth, assuming that there are no congenital lesions, probably the most frequent conditions are hemorrhages or atelectasis. Vitamin K given to the mother prior to labor or the infant if need be has already proven very useful. Inanition fever which is so common and was so long unrecognized can easily be combated. But some of us during the first few weeks of life are too prone to believe that crying necessarily means colic. Frequent and accurate weighings are more valuable in early life than taking the temperature. Neo-natal mortality remains entirely too high for according to reliable statistics of all the deaths that take place during the first year one half occur during the first week.

While we blame mothers for their frequent unwillingness to nurse the infant it should not be forgotten that now and then the attending physician takes the baby off the breast without due consideration. Regardless of what milk or what proprietary milk preparation is used the doctor should know its caloric value and percentage composition. The tendency today is to begin solid food very early during infancy. The question may well be raised whether the giving of cereals, egg, and vegetables too early, is not responsible in part for the increase in allergic reaction. On the other hand babies if not fed before they reach one year often object to solid food.

Although the laity are bombarded with too much vitamin sales talk yet we know that in food or otherwise vitamins are essential. In-

fants who receive a potent cod liver oil and thus added vitamin D are less prone to rickets. The vitamin A may not often be necessary but can do no harm. Where the appetite fails or there is sleeplessness vitamin B in the form of yeast, liver and thiamin by mouth or even hypodermically is of value. While scurvy today is extremely rare yet a vitamin C deficiency does produce ill effects and babies who do not receive enough orange juice, tomato juice or ascorbic acid suffer from time to time. There are frequently clear indications for the administration of iron. It is a simple matter to determine or estimate the hemoglobin percentage. The response to iron in simple anemia is quick and gratifying. Rarely do we need to administer blood intramuscularly or by the vein. Calcium therapy during infancy is not a panacea however. Some infants do require calcium and are markedly helped by it. Only occasionally need it be given except by mouth.

For the average child endocrine therapy is not necessary. However, it is remarkable how great a change can be brought about by the careful administration of thyroid extract in those who need it.

The story of immunization is not a new one. Doctors now have a more complete knowledge of this procedure. Most mothers, through magazines or friends, have been told about them. Nevertheless the fact remains that only a few babies are protected actively against infection. Prophylactic medicine, especially where it has to be paid for, has not made much headway. All infants at or before six months should be immunized against diphtheria. Today we give three doses of diphtheria toxoid subcutaneously, or two doses of alum-precipitated toxoid. This gives over 90% immunity in about two months. Latterly some pediatricians are using diphtheria and tetanus toxoid mixed, at an interval of two or three months. This promises much for both tetanus and diphtheria in this state are rather frequent. From figures assembled by reliable

sources we must conclude that the administration of three doses of Sauer's whooping cough vaccine gives more than 90% protection against this common and serious disease but four months must pass before complete immunization is brought about. Severe reactions are very rare but can occur. For over 150 years the medical profession has known of the value of smallpox vaccination. Children are vaccinated but usually not until they enter school. Vaccination ought to be done in all babies unless ill during the first year and preferably before six months. It must be admitted that few of us do carry out this pro-

cedure routinely. At about two years or surely before three each child should be given three doses of typhoid vaccine. South Carolina still has several hundred cases annually and a large number of these are in children. There is no longer any question as to the value of this but unfortunately it is too often postponed.

Perhaps this sounds like a very elaborate program for the first two years of life and it is far more than most youngsters receive. On the other hand horticulturists and stock raisers go to no end of trouble and expense to have satisfactory results. Surely it should be worth while to give adequate care to the coming generation.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

January 24, 1941

Case of Dr. W. H. Prioleau

ABSTRACT NO. 431 (72940)

Student L. S. Constine, (presenting):

History: This 39 year old negress admitted on 12-19-40 with chief complaint of "pain in my chest and it feels like a worm moves up and down my throat and makes me cough." Onset of illness 6 months ago when she noted a choking sensation in her throat which seemed to be related to swallowing. Three months prior to admission she had hemoptysis on two occasions, about 3 weeks apart. At times she had had a burning sensation in the upper mediastinum when swallowing, and has vomited food shortly after meals on several occasions. No hematemesis or melena. During the last month she has noted voice changes with moderate hoarseness and occasional attacks of dyspnoea. Weight loss, weakness and nervousness during last few months.

Examination: T-98 P-88 R-20 B. P.-140/98.

Revealed a well developed, but dehydrated and emaciated, slightly apathetic negress. Skin dry; mucosa pale. Teeth grossly carious. Tonsils injected and moderately enlarged; pharynx injected. Cervical, epitrochlear, axillary and inguinal nodes palpable but discrete. Chest negative. Abdomen soft; skin markedly dehydrated. Slightly hyperactive reflexes; no other abnormal findings.

Laboratory: Urinalysis negative except for a few pus cells.

Blood 12-19-40	12-29-40
WBC. 14,400	8,200
Hb. 7.5 gms.	7 gms.
Polys. 69%	

Feces 12-20-40: Greenish brown, firm, mucus one plus, occult blood four plus.

Sputum 1-10-41: Negative for fungi or tubercle bacilli.

Spinal Fluid: Wassermann and colloidal gold negative. **Blood:** Wassermann negative; Kline doubtful.

Course: Low grade fever throughout. Continued to complain of discomfort in throat and slight substernal pain. Occasionally expectorated small amounts of blood. On 1-6-41 pt. had an attack of coughing with hemoptysis of about 10 cc. of blood. Moderately dyspnoeic with labored respirations and inspiratory difficulty. Supraclavicular spaces retracted with inspiratory stridor. Very nervous. Given sedatives. Similar episode on 12-29-40. On 1-11-41 had similar attack and patient became rapidly worse with irregular and weak pulse and drop in BP to 60/35. Expectorated about 10 cc. of blood. Rhonchi heard throughout chest. Expired at 5:30 P. M.

Dr. Prioleau: (Conducting): Mr. Turner, will you give us your impression of this case?

Student Turner: All the symptoms in this case make me think first of all of carcinoma of the esophagus. Whereas hemoptysis is not one of the usual symptoms of esophageal carcinoma, it may well occur in this disease, due to extension of the carcinoma to the trachea with subsequent erosion of its wall and lining. The fact that the hemoptysis was of three months duration made me first suspect that the carcinoma was bronchogenic and of course this possibility is not entirely eliminated. Enlargement of the mediastinal glands from this type of malignancy might so distort or compress the esophagus

as to produce dysphagia. I feel that radiographic examination of the chest would be of value here. Any lesion extensive enough to produce hemoptysis should usually be picked up by X-ray studies. Of course we do not definitely know that the patient had true hemoptysis; the bleeding may have simply been into the obstructed esophagus with eventual overflow.

Dr. Prioleau: Yes. X-ray might help, but remember that we are due to experience some of our greatest falls if we depend on X-ray to definitely rule out any and all pathologic change. Do you think that an aortic aneurysm can be definitely eliminated?

Student Turner: Yes, I believe the findings in general together with a negative Wassermann remove an aortic aneurysm from the diagnostic picture.

Dr. Prioleau: What other symptoms are quite diagnostic of carcinoma of the esophagus?

Student Turner: There is evidence of pressure on the trachea in this case and this complication frequently occurs. Carcinoma of the esophagus spreads first to liver, then to the larynx and trachea. The dysphagia, loss of weight and vomiting are all helpful in making a diagnosis of carcinoma of the esophagus.

Dr. Prioleau: When would a patient be most likely to vomit with carcinoma of the esophagus?

Student Turner: Vomiting would be most likely after the growth had progressed to such a stage that obstruction was practically complete. In this case it would be really more a type of regurgitation than actual vomiting.

Dr. Prioleau: Where would you expect this carcinoma to be?

Student Turner: The most likely location is in the middle portion where the left bronchus crossed the esophagus. A growth in this location would also explain the hoarseness which was probably due to pressure on the recurrent laryngeal nerve either by actual tumor or enlarged lymph nodes or conceivably by irritation from invasion of the adjacent tissues by the neoplasm. I think a laryngoscopic examination would have been a very worthwhile procedure.

Dr. Prioleau: How do you account for the elevated white blood count?

Student Turner: Aspiration of blood and infected cellular detritus from the tumor might cause enough lobular pneumonia to account for the leucocytosis.

Dr. Prioleau: Mr. Rosenberg, what suggestions have you to offer as to the cause of the leucocytosis.

Student Rosenberg: In the first place, the elevation is not very pronounced and the subsequent normal count probably indicates that the leucocytosis is not of great significance. She may have simply had an upper respiratory infection. Necrosis and ulceration of a rapidly growing tumor is often followed by secondary infection and this may be the basis for the leucocytic response.

Dr. Prioleau: What is the most common infection

accompanying carcinoma of the esophagus?

Student Rosenberg: I believe there is often some associated pharyngitis, and lung infection due to aspiration is a frequent complication also.

Dr. Prioleau: I believe that a localized mediastinitis is the most common finding. Are you quite satisfied that this patient had carcinoma of the esophagus?

Student Rosenberg: The only other location I am considering is bronchogenic carcinoma and I think a growth in a bronchus would have to be quite large to press on the esophagus and give the sensation of choking while swallowing. With a growth of this size it would then appear that some atelectasis would be inevitable, either from actual occlusion of the bronchus by the growth or from bleeding and sloughing of the tumor into the bronchial tree. We have no evidence of atelectasis here. Her marked dehydration indicates that she even had difficulty in drinking and her emaciation shows that her food intake was inadequate.

Dr. Prioleau: How do you know she had a carcinoma?

Student Rosenberg: The bleeding and emaciation offer very strong presumptive evidence.

Dr. Prioleau: Could not a crico-pharyngeal diverticulum give rise to the same findings?

Student Rosenberg: The bleeding would not be as likely in a diverticulum.

Dr. Lynch: I would like to ask the students about the episodes of dyspnoea and bleeding. Do these fit in with carcinoma of the esophagus?

Student Rosenberg: Well, the patient certainly had bleeding into the bronchi, which terminally was apparently quite massive. I admit that this is not the usual termination of carcinoma of the esophagus and can explain it only on the basis of erosion of the trachea.

Student Turner: I think that X-ray examinations of the esophagus in conjunction with barium would have definitely detected and settled many things.

Dr. Prioleau: Well we have such a report from Doctor Kalayjian that I will read: "December 21, 1940. Fluoroscopic and radiographic examination of the esophagus shows a definite narrowing and filling defect beginning at the level of the 4th dorsal vertebra and extending down for a distance of approximately three vertebrae. There is slight dilatation of the esophagus above this."

This patient was examined in May of this year for esophageal obstruction and according to the report there was no evidence to support the presence of a lesion at that time. However, now we feel that there is definitely a lesion producing some obstruction and irregularity of the esophagus. This is most likely an early neoplasm."

Mr. Mays, how do you explain the lack of findings in May?

Student Mays: I believe that a very malignant tumor may not be detectable at the onset of its

growth and then grow very rapidly and produce profound symptoms in a rather short period of time.

Dr. Kredel: I would like to say a word about the vomiting shortly after meals. With obstructive lesions of the esophagus there is usually some dilatation of the esophagus above the point of obstruction where food accumulates and may be kept there for an hour or so, to be eventually expelled,—really a regurgitation rather than actual vomiting.

Dr. Pratt-Thomas: (Demonstrating specimen of esophagus and trachea). This is a case of carcinoma of the esophagus but one which presents several unusual features. As you know, carcinoma of the esophagus may be in the form of a flat infiltrating ulcer, a diffuse infiltration, or more rarely, a bulky polypoid growth. It is an example of the last named type that we have here. Here in the middle third of the esophagus just opposite to the bifurcation of the trachea you see a large polypoid cigar-shaped neoplasm, 8.5 cm. in length, which completely blocks the esophageal lumen and extends down to within 3 cm. of the cardiac orifice. Only its upper portion is attached to the wall of the esophagus. The tissues between the esophagus and trachea are densely infiltrated with glistening, crisp, grey neoplastic tissue and here you see a tumor mass extending through the posterior wall of the trachea just above the bifurcation and partially obstructing both main stem bronchi. At necropsy this growth was coated with a film of fresh blood clot and similar clot was found blocking both main-stem bronchi and extending some distance into their ramifications.

These polypoid tumors are usually of the adenocarcinomatous type, but this one is purely epidermoid and considerably more active than the average.

The tumor had spread to lymph nodes at the bifurcation of the trachea and along the esophagus. If this woman had lived longer she would have probably developed a chylous ascites for there was obstruction of the thoracic duct at a point where the thoracic duct is in close relationship to the left side of the esophagus, and there was marked distention of the duct and adjacent lymphatic channels. The cisterna chyli consisted of large dilated pouches filled with milky fluid.

Dr. Lynch: I don't see how a definite diagnosis of carcinoma of the esophagus can be so glibly made. Most of our cases are of the ulcerative and infiltrative type and this is the first one of this type and form that I have seen. As Doctor Prioleau has mentioned, some infection in the mediastinum is usually present. The manner in which she died is very unusual, I do not believe that aortic aneurysm can be definitely ruled out and I would certainly want more than one Wassermann in a case presenting these features. I think that bronchogenic carcinoma might also have caused this picture, and do not believe that the diagnosis of carcinoma of the esophagus can be definitely made *without* the aid of biopsy and X-ray findings.

Dr. Prioleau: In connection with aortic aneurysm, I would like to say that X-ray is not absolutely diagnostic and can't be definitely depended upon in this condition.

The doctors' books are of a different sort from the lawyers' and the preachers'. They in their professions depend as yet largely upon authority. The doctor, ever since Galen was toppled from his dominating seat, has been skeptical of authority and perhaps too much inclined to novelty. But if he makes any pretense of "keeping up" with the amazing, prodigious, and often revolutionizing advances which, through some new discovery, occur almost overnight, he must read, or attend meetings—or better, both.

Taken from CONSECRATIO MEDICI,
by Harvey Cushing, M. D.

The Army Medical Corps has called the following to duty:

Dr. John B. Consar, Bishopville.
Dr. James E. Lipscomb, Greenville.
Dr. George C. Smith, Florence.
Dr. Howard I. Weinstein, Sumter.

The Medical Reserve Corps has called to active Duty—Dr. LeGrand G. Able and Dr. William C. Herbert, both of Spartanburg.

Col. Wm. H. Moncrief addressed the Negro Physicians Post-graduate Assembly in annual session at the State A. and M. College in Orangeburg, on January 29. He discussed "The Place of the Family Physician in the Control of Tuberculosis."

The program of the meeting of the South Atlantic Association of Obstetricians and Gynecologists shows one participant from this State in the form of Dr. J. D. Parker of Greenville, who was scheduled to deliver an address on "Acute Polyhydramnios." The meeting was held on February 7th and 8th at Jacksonville.

Dr. Manley Hutchinson is a member of the Executive Committee from this State.

Dr. J. D. Guess of Greenville was also scheduled to discuss a paper at this meeting.

Dr. David B. Gregg of Rock Hill, formerly engaged in the practice of internal medicine at Greensboro, N. C., has joined the staff of the South Carolina Sanatorium as resident physician.

BOOK REVIEWS

FILM REVIEW

"ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS" is the title of a recent sound film sponsored by the National Tuberculosis Association, and prefaced by an introduction by Dr. Kendall Emerson. It presents in a very satisfactory way the process of induction of pneumothorax and discusses the indications and contraindications for the procedure. The reproductions of X-ray films are excellent and the photography of fluoroscopic images is unique. Adequate diagrams and pathologic specimens complete the picture.

The film can be highly recommended for showing to any general medical audience, and should be most useful in teaching medical students and nurses. It requires about thirty minutes for showing. Information about the picture may be obtained from Capitol Films, 11 West 42nd Street, New York City.

J. I. W.

APPLIED PHARMACOLOGY. By Hugh Alister McGuigan, Ph. D., M. D., F. A. C. P. Professor of Pharmacology and Therapeutics, University of Illinois, College of Medicine. Illustrated. St. Louis—The C. V. Mosby Company. 1940. Price \$9.00.

The organization of this text leaves much to be desired. Although purporting in the main to discuss drugs of therapeutic value in relation to various physiological systems, groupings on the basis of chemical or physical properties increase the confusion. e. g. It is startling to find iron therapy discussed in a chapter on Chemotherapy of Syphilis; or to find cod liver oil and concentrates described under Lipids, rather than in the chapter on Vitamins.

An attempt is made to present sufficient physiology to assist in understanding the apparent pharmacologic mechanisms which are presented.

The illustrations are excellent—all borrowed—chiefly from Jackson and from MacLeod.

A condensed presentation on prescription writing and abbreviated chapters on pharmacy may assist those not specifically trained in this field. Including B. P. preparations broadens the scope; but official N. F. preparations are omitted. For Americans, the Recipe Book of the American Pharmaceutical Association (not mentioned) is more available than Martindale's Extra Pharmacopoeia or the British Pharmaceutical Codex.

There appear to be several errors in the use of words, e. g. ethyl carbonate for ethyl carbamate, and a number of useful drugs, such as hexylresorcinol, are omitted.

J. H. H.

NEOPLASTIC DISEASES. A TREATISE ON TUMORS. By James Ewing, A. M., M. D., Sc. D., LL. D., Professor of Oncology at Cornell University Medical College, New York City; Consulting Pathologist, Memorial Hospital. Cloth. 1160 pages with 581 illustrations. Fourth Edition, revised and enlarged. W. B. Saunders Company, 1940. Price \$14.00.

The fourth edition of Dr. Ewing's book brings the outstanding text on tumors up to date, an interval of 12 years having elapsed since the appearance of the previous revised edition. The author summarizes his theme for the present revision in the first chapter,—“The modern student is paying more attention to the physiology of tumors and is thereby gaining a deeper insight into etiology, symptomatology, diagnosis and general biological significance of many neoplasms. The study of hormones, the altruistic relations of organs, the chemistry of malignant cell growth, the action of filterable agents, the production of tumors by specific chemical substances and the behavior of tumor cells in cultures represents the most significant advances of the century and emphasize still further the individual nature of different tumors.”

The general organization of the book remains largely the same. The additional and modified material has been incorporated at the expense of less pertinent and outmoded information without appreciable increase in the bulk of the volume. The photographic illustrations remain practically unchanged from those of the preceding edition. Oncology is stressed as a distinct science and tumors, in general, are treated as individual entities. Revisions in the light of the enormous literature published in the past decade are on the side of conservatism. Timely modifications of theory and emphasis are notable in the chapters on Malignancy of Cancer, Its Effects on the Organism, Chemistry of Tumors, Serology, Experimental Cancer Research, Theories on the Nature of Cancer and the Special Etiology of Tumors; Trauma. In the last named chapter is a valuable discussion on the relationship of trauma to neoplasia in reference to industrial compensation laws in the light of medicolegal evidence. Revision of material on tumors of the central nervous system, peripheral nerves and ovarian tumors is noted, particularly in the case of those in the latter group that produce sex changes. A helpful classification for tumors of the ovary is offered. The bibliography shows additions, though not commensurate with the great bulk of literature that appeared during the period covered by the revision.

The volume retains its status as the bible on tumors for the surgeon and practicing pathologist

and a most valuable reference book for those having a less specialized interest in neoplasia.

M. E. C.

ELECTROCARDIOGRAPHY IN PRACTICE. By Ashton Graybiel, M. D., Instructor in Medicine, Courses for Graduates, Harvard Medical School; Research Associate, Fatigue Laboratory, Harvard University; Assistant in Medicine, Massachusetts General Hospital; and Paul D. White, M. D.; Lecturer in Medicine, Harvard Medical School; Physician, Massachusetts General Hospital, in charge of the Cardiac Clinics and Laboratory. 319 pages with 272 illustrations. Philadelphia and London: W. B. Saunders Company, 1941. Cloth, \$6.00.

There has grown up around Paul White and Howard Sprague, at the Massachusetts General Hospital, an able group of young men whose contributions to American cardiology have been sound and worthwhile. Trained in a school whose merit lies, among other admirable traits, in thorough scholarship and painstaking attention to detail, this group has done worthwhile and enduring work.

Saunders has just brought out "Electrocardiography in Practice," by Graybiel and White. This book is written for the practitioner who wishes to learn the fundamentals of electrocardiography and for the senior medical student and resident. It seems to the reviewer that it is admirably adapted to this purpose. The printing and the reproductions of cardiograms are of a high order. The general arrangement of the book is excellent. Its chief merit lies in the large number of graphs and a convenient page order so that the test pertinent to each cardiograph lies on the page opposite. The introductory text is brief—and reasonably adequate. A balance is sought between over-emphasis of the arrhythmias and too great neglect of them. The collection of data concerning coronary and myocardial disease is recognized as the most fertile field for electrocardiography and emphasis is placed on this.

A splendid feature of the book which adds immensely to its value is the large number of unlabeled electrocardiograms for study and practice. The student may, after his own interpretation, read that of the authors'. These graphs are chosen from the thousands which have accumulated during the past twenty years at the Massachusetts General Cardiac Clinic. The mode of teaching utilized in this book is that employed by the authors and their colleagues in conducting the splendid summer courses in cardiology for postgraduate students, held for many years, at Harvard. This is a book which may be safely recommended to the practitioner desirous of familiarizing himself with electrocardiography.

Olin B. Chamberlain.

This annual volume is so well known and established as the last word in information on the subject, that little need be said except that it quite comes up to standard and affords a valuable guide to the practitioner floundering in the sea of the confusing claims of the less scrupulous of the manufacturers. The criteria for selection of items are explained, and adequate notation is made of such new remedial products as are worthy of consideration.

J. I. W.

THE DOCTOR AND THE DIFFICULT CHILD. William Moodie, M. D., Medical Director, London Child Guidance Clinic and Training Center. 1940, New York. The Commonwealth Fund. \$1.50.

Whenever the practitioner who handles children sees the announcement of a book of this nature, he looks hopefully for a practical manual which will help him with the numerous problems of child management. The publishers' remarks state that "Dr. Moodie's book is a contribution to the practice of child guidance, which is becoming more exact in its knowledge, sure in its methods and successful in its instructions." This encouraging statement on the cover leads the reader enthusiastically into the well-written, common-sense, practical treatise on a subject which is still far from receiving among physicians in general the consideration which is its due.

The author has a practical approach and practical suggestions. The general practitioner or pediatrician is a bit discouraged by a paragraph (Page 93) which says:

"Child guidance is a costly service, but it necessarily is so if it is to be efficient, because of its highly specialized nature and the time that must be spent on each case. Practiced by adequately qualified and experienced specialists it is scientific and safe. The recognition of cases requiring investigation is comparatively simple, and the remedy is often merely a matter of applying general principles. Unfortunately, in more complicated cases treatment may be so tedious and difficult as to tax the efforts of the most skilful and expert clinic staff."

This reviewer can find little to quarrel with in this book. His own feeling that the correction of misguided children involves the extremely difficult job of correcting parents themselves misguided, and the correction of situations muddled by so many complicating human relations, that the maintenance of gains made with the individual and the prevention of similar situations, which must later arise, makes the whole task a bit discouraging.

Be that as it may, the author has given us a book which has sifted the essentials into an interesting and readable mixture.

J. I. W.

NEW AND NONOFFICIAL REMEDIES, 1940. 656 pages with Index and Supplement. Price \$1.50. Chicago-American Medical Association, 1940.

PRINCIPLES OF SURGICAL CARE. By Alfred Blalock, M. D., Professor of Surgery, Vanderbilt University School of Medicine, Nashville, Tenn.

Illustrated. St. Louis. The C. V. Mosby Company, 1940. Price \$4.50.

No one is better qualified than Dr. Blalock to write upon the principles of surgical care. Every day problems in the treatment of surgical cases are considered from both the laboratory and the clinical standpoint. The approach to the various subjects is strictly scientific. The author cites freely from his own laboratory and clinical experience as well as that of others. He comments upon both, drawing logical deductions. Strictly avoided are rules of thumb for treatment.

The book is bound to be of interest and value to the student of surgery. To a limited extent it will prove an excellent reference volume. Among

the subjects considered are anesthesia, shock, fluid and electrolyte disorders, nutritional disturbances and the treatment of wounds.

Of particular interest is the chapter on shock—a subject upon which the author has done a great deal of experimental work. His conception of the condition as expressed by the term "Peripheral Circulatory Failure"—leads to a more rational treatment.

The volume is by no means encyclopedic, nor does it pretend to be so. It covers a limited number of subjects in an authoritative manner. One cannot help but be benefitted by reading it.

W. H. P.



CAT. DR CHARLES A
MOBLEY

In the last issue of the Journal, there was an account of the presentation of a portrait of Dr. Mobley to the Trustees of the Tri-County Hospital at Orangeburg.

Dr. Mobley has had many honors from the profession in the State and elsewhere and was a pioneer worker for the establishment and growth of the Orangeburg Hospital.

The portrait was painted by Mrs. Sheldon Cope and presents a lively likeness of the familiar appearance of Dr. Mobley.

The following committees from the Greenville Society were appointed for the arrangement of the April meeting of the Association: GENERAL CHAIRMAN, Dr. Thomas Brockman; FINANCE COMMITTEE, Dr. W. S. Judy, Chairman; Dr. R. C. Bruce, Dr. L. H. McCalla, Dr. T. B. Reeves; EXHIBIT COMMITTEE, Dr. Keitt Smith, Chairman; Dr. Mordecai Nachman, Dr. J. M. Fewell, Dr. W. C. Hearin, Dr. C. P. Corn; ACCOMMODA-

TIONS COMMITTEE, Dr. J. L. Sanders, Chairman; Dr. L. W. Boggs, Dr. Henry Ross; HALL ARRANGEMENTS COMMITTEE, Dr. J. Warren White, Chairman; Dr. George Wilkinson, Dr. Will Fewell; ENTERTAINMENT COMMITTEE, Dr. Hugh Smith, Chairman; Dr. B. C. Bishop, Dr. R. M. Pollitzer; REGISTRATION COMMITTEE, Dr. H. M. Alison, Chairman; Dr. J. G. Murray, Dr. J. W. McLean.

Recent Influenza Epidemic in South Carolina

G. E. McDaniel, M. D., Columbia, S. C.

An epidemic of influenza occurred throughout the entire State in January of this year. It behaved characteristically of most epidemics of this disease in its rapid spread over a wide area and in attacking large masses of the population.

In this epidemic, the incidence increased from a below-normal of 440 reported cases the last week of December, 1940, to a high incidence of 11,731 cases the fourth week in January of this year. The number of cases rapidly declined to about normal during the next three weeks. A total of 36,719 cases were reported in January, more than in any normal full year. The first epidemic incidence occurred in Pickens County the first week in January. From there it spread during the next three weeks to almost all the other Counties of the State. This reported incidence is only a small percentage of the total in the State but is indicative of a definite epidemic of more than local intensity.

The disease in this epidemic was much less severe than that in 1918 and some of the smaller epidemics since. It was accompanied by few complications. The race and age distribution of cases seemed to vary among some counties and communities. A tracheitis and laryngitis with a rather persistent hoarseness that lasted two weeks or longer after the attack were prominent symptoms in this epidemic.

Influenza affected all geographic divisions of the United States this winter except the New England and Middle Atlantic sections. It first occurred as an epidemic on the Pacific Coast about mid-November, 1940. It spread eastward to the Mississippi Valley States by mid-December and to the Atlantic Coast States by early January.

Epidemics of influenza spread so rapidly and so widely that ordinary methods of control measures of isolation and quarantine have little or no effect. Some progress, however, is being made in the study of influenza. Two specific viruses have been isolated and some

encouraging experimental results with vaccines have developed in recent months. More study of the effects of these in the human is necessary before their value will be known.

What effect war, with its rigors and excitement, disrupted civilian populations and mass movements of troops, has on influenza, no one definitely knows. These factors sometimes seem to play some role in the pandemics at least. If so, does 1941 have a great pandemic of the disease in store for us?

WANTED: A young doctor who has had thorough hospital training; able to do surgery; to be associated as a partner or on salary basis; in a medium size hospital in a town of 10,000 people, several manufacturing industries, fine farming and dairy-ing section and female college. Address replies to Journal S. C. Medical Association, Seneca, S. C.

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NEWS ITEMS

Greensboro, N. C., Feb. 25.—(AP): The Tri-State Medical Association ended its two-day annual meeting here with a memorial service for deceased members, election of officers and presentation of papers in a public session.

Dr. A. C. Brenizer, of Charlotte, president-elect, ascended to the presidency and Dr. George Wilkinson, Greenville, S. C., became president-elect. Other officers elected are: Dr. J. M. Northington, Charlotte, reelected secretary-treasurer; Dr. J. W. Hooper, Wilmington, vice-president from North Carolina; Dr. H. J. Langston, Danville, vice-president from Virginia; Dr. George Bunch, Columbia, vice-president from South Carolina; councilors, who serve three years, Dr. Steele Dendy, Spartanburg, S. C.; Dr. J. W. Davis, Statesville, and Dr. Allen Barker, Roanoke, Va.

In the opening session Dr. R. G. Douglas, of the lying-in-hospital, New York, presented a paper on "Present Day Trends in Obstetric and Gynecologic Practice."

Presented during the day were papers by Drs. G. R. Wilkinson, Greenville, S. C., and William H. Prioleau, Charleston, S. C.

EXCERPTS FROM THE ANNUAL MESSAGE OF GOVERNOR MAYBANK—JAN. 15, 1941

"The Health Department of South Carolina is to be commended for the excellent work that it is doing and for their cooperation with Selective Service."

There is still need for a far more comprehensive health program in South Carolina. I stated in my inaugural address that a half sick man cannot do even a half day's work. A serious situation confronts our people and has confronted us for many years. It has come to light again in the operation of the Selective Service and I am going to discuss the matter with you.

The matter concerns those of our citizens who have venereal diseases. It will interest you to know that some 240,000 citizens are registered for military training, and will be or have been examined. In these examinations we have found many who have venereal diseases.

After discussing this with Dr. Harry Barnwell and Dr. Adams Hayne, it is my belief that the vast majority of these citizens so affected could be cured if they submitted to proper treatment. However, some of these have refused to be treated.

It is my thought that in order to insure a better and more healthful population for the future that a law should be passed making it a misdemeanor for anyone having a venereal disease who is not being treated and being cared for.

For years those having typhoid fever, diphtheria and other communicable diseases have been forced to submit to treatment. It is equally essential that these possessing venereal diseases should likewise be treated.

In addition to your insisting upon these treatments it is my opinion that a suitable marriage law should be passed requiring a physical examination for those to be married and a doctor's certificate to insure a more healthy generation to follow. All progressive states have such a law.

GREENVILLE COUNTY HOSPITAL BENEFIT ASSOCIATION

By C. C. ARIALL, M. D.

Two years ago, the Greenville County Medical Society became interested in the organization of a non-profit hospital service plan whereby hospital care might be provided for the people of Greenville County. A committee was appointed to look into the possibility of such an organization. Since that time much effort has been spent in working out this project. The city of Greenville contributed \$2,000.00; the county of Greenville \$4,000.00; and the Duke Foundation \$4,000.00. On December 5, 1940, forty-eight citizens of Greenville County, interested in social welfare and charitable services, met in the directors' room of the Greenville Chamber of Commerce for the purpose of incorporating a hospital care association. Those present were declared to be the charter members of the association which is to be called "Greenville County Benefit Association."

The general management of the affairs of the Association was placed in the hands of a board of directors. This board is composed of representatives from Greenville General Hospital, St. Francis Hospital, from the licensed physicians, and from the general public. The members are elected at the annual meeting and are to serve for one year.

A charter and license have been obtained from the Insurance Commissioner of South Carolina. Mr. Joel W. Gray of Durham, N. C. and Greenville, S. C., has been elected to serve as executive secretary of the Association. The offices of the Association are at 9 South Main St. Mr. Gray is a graduate of Clemson College.

The Association shall receive as members groups of not less than ten nor more than one hundred. Upon payment of a small weekly premium, these members shall receive hospital care in event of sickness, ailment, or accidental injury, to the extent set forth in its contract. The general plan is to provide a bed and board in ward accommodations.

(Continued on page 74)

WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

A MESSAGE FROM THE PRESIDENT

With the Sixteenth Annual Convention of the Woman's Auxiliary to the South Carolina Medical Association only two months ahead, let us make plans to be in Greenville on the 16th of April and help make this convention the best in the history of the organization.

All doctors' families are invited to attend, though only delegates can vote.

Our National President is to be the guest speaker. I am sure you do not want to miss hearing her, nor will you want to miss any of the delightful social features which are being planned by the Greenville Auxiliary.

Counting on the continued cooperation of every Auxiliary member, I am

Yours for a good Convention,
LOUISE M. TIMMONS.

Hotel Carter will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the American Medical Association, which will be held in Cleveland, June 2-6, 1941. Requests for reservations should be sent immediately to Dr. Edward F. Kieger, Chairman of the Committee on Hotels and Housings, 1604 Terminal Tower Building, Cleveland, Ohio.

The Annual State Meeting of the Auxiliary to the South Carolina Medical Association will be held in Greenville, April 15—17, 1941. The Poinsett Hotel will be headquarters for the convention and the meetings of the auxiliary.

Requests for reservations should be sent as soon as possible to the hotel management. All those desiring reservations at auxiliary headquarters should make such request in their application.

Rates for rooms at the various hotels are as follows:

	<i>Single room with bath</i>	<i>Double room with bath</i>	<i>Triple room with bath</i>
Poinsett Hotel —	\$2.50—\$4.00	\$2.50—\$3.50	\$1.75—\$3.00
Ottaray Hotel —	2.00— 3.00	3.00— 4.50	
Hotel Greenville —	2.00	3.50	

PICKENS COUNTY MEDICAL AUXILIARY

The Pickens County Medical Auxiliary held their February meeting at the home of Mrs. W. B. Furman, Easley.

The meeting was called to order by the President, Mrs. P. E. Swords, Liberty, who also conducted the devotional, which consisted of a Bible reading and a questionnaire of biblical characters.

Eleven of the fifteen members answered the roll call. The routine of business was transacted, which included the sponsoring of the "Survey of Women's Interests" issued by the American Medical Association.

Mrs. J. W. Kitchin, Liberty, had charge of the devotional and introduced Mrs. S. T. McKittrick, Unit Supervisor, Housekeeping Aide Project of Pickens County, who gave an outline report on activity work.

Mrs. C. N. Wyatt gave a most interesting talk on "Horse and Buggy Days" and gave several incidents of the early practice of her doctor husband, and paying tribute to the medical profession. Mrs. Wyatt began her talk, going back to her earliest recollections of a "saddle bag" doctor she knew in Texas, showing a photograph of the doctor and his wife. She gave some amusing incidents that she personally experienced as a doctor's wife and showed a picture of Dr. E. F. Wyatt in his buggy, ready for a round of professional calls.

Mrs. E. M. Ellison and Mrs. Taylor O'Dell were also visitors at this meeting.

At the conclusion of the meeting, the hostess served a salad course with coffee.

MRS. W. B. FURMAN,
Publicity Chairman, Pickens County.

Mrs. H. L. Timmons of Columbia, President of the Auxiliary, was honored guest at a luncheon, at which Mrs. H. J. Crooks and Mrs. Mordecai Nachman entertained at the Poinsett Hotel in Greenville. The purpose of the occasion was to complete plans for the state convention in April.

The following program for the convention is announced by the State President, Mrs. H. L. Timmons of Columbia.

PRELIMINARY MEETINGS

April 15, 1941

6:30 Buffet Supper—Home of Mrs. R. M. Pollitzer.
Hostesses: Greenville members of Executive Board.

Poinsett Hotel, private dining room, mezzanine floor.

8:00 Student Loan Fund—Mrs. L. O. Mauldin, Greenville, Mrs. T. A. Pitts, Columbia.

8:45 Executive Board Meeting — Mrs. H. L. Timmons, Columbia, presiding.

PROGRAM

House of Delegates—9:30 A. M.

Club Dining Room—Poinsett Hotel

Mrs. H. L. Timmons, Columbia, presiding.

Mrs. J. W. Bell, Walhalla, Parliamentarian.

Call to Order

REPORTS OF OFFICERS.

REPORTS OF COUNCILORS.

REPORTS OF COMMITTEE CHAIRMEN

REPORTS OF COUNTY PRESIDENTS.

Business.

Report of Credentials Chairman.

Election of delegates and alternates to the Annual Convention of the Woman's Auxiliary to the American Medical Association in Cleveland, June 2-6.

Report of Nominating Committee—Mrs. T. A. Pitts.

Election of Officers—Minutes—Adjournment.

PROGRAM MEETING 11:30 A. M.

Club Dining Room—Poinsett Hotel

Mrs. H. L. Timmons, Presiding

Call to Order—Invocation: Rev. H. C. Ritter.

Song—"God Bless America," led by DuPre Rhame.
Club Woman's Creed.

Address of Welcome—Mrs. J. H. Crooks, Greenville.

Response—Mrs. Leo F. Hall, Columbia.

Greetings from Mayor C. Fred McCullough.

Greetings from Greenville County Medical Society—Dr. C. C. Ariail, Greenville.

Presentation of the President of the South Carolina Medical Association—Dr. W. L. Pressly.

Vocal Solo—Mr. DuPre Rhame; accompanist, Mrs. DuPre Rhame.

Duet—Mrs. Kenneth Cass and Mr. DuPre Rhame.

Introduction of Honor Guests and Past Presidents.

In Memoriam—Mrs. C. P. Corn of Greenville.

Address by Mrs. V. E. Holcombe, President of the Woman's Auxiliary to the American Medical

*For the Local Treatment
of Acute Anterior*

URETHRITIS

(DUE TO NEISSERIA GONORRHEAE)

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1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph. Gon. & Ven. Dis.*, 23, 201 (March) 1939.

*Silver Picrate, is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

Association.

Introduction of Convention Chairman.

Awarding of Strait Historic Trophy, Mrs. J. E. Orr.

Awarding of the Furman Health Trophy, Mrs. John G. Hart.

Awarding of the T. R. W. Wilson Publicity Trophy, Mrs. J. L. Sanders.

Report of President, Mrs. H. L. Timmons.

Presentation of President's Pin, Mrs. L. O. Mauldin.

Presentation of President's Pin, Mrs. C. C. Ariail.

Report of Committee on Resolutions, Mrs. John G. Hart.

Announcements by Convention Chairman, Mrs. L. H. McCalla.

Presentation of Gavel.

Installation of Officers, Mrs. W. C. Abel, Columbia.

Adjournment.

LUNCHEON—1:30 P. M.

Greenville Country Club

3:00—5:00 Garden Tour.

5:00—6:00 Tea at home of Mrs. Willard Hearin, E. Hillcrest Drive.

APRIL 17—10:30 A. M.

Fashion Show at Cabaniss-Gardner

Arrangement made at Information Table for playing golf.

Honor Guest—Mrs. V. E. Holcombe, President of

Woman's Auxiliary to the American Medical Association.

ADVISORY COUNCIL

Dr. Robert Durham

Dr. Leon Banov

Dr. Edith Eskrigge

Dr. Jesse O. Willson

COMMITTEE CHAIRMEN 1941

General Chairman ---- Mrs. Lawrence H. McCalla

Co-Chairman ----- Mrs. I. H. Grimball

Secretary ----- Mrs. L. O. Mauldin

Credentials & Registration ---- Mrs. Warren White

Information and Hospitality ---- Mrs. W. H. Lyday

Publicity ----- Mrs. J. L. Sanders

Hotels & Headquarters ----- Mrs. T. R. W. Wilson

Luncheon ----- Mrs. J. G. Murray

Tea & Garden Tour ----- Mrs. Willard Hearin

Music ----- Mrs. W. H. Powe

Chairman Special Guests ----- Mrs. C. P. Corn

Transportation ----- Mrs. Everette Poole

Pages ----- Mrs. L. O. Mauldin

PAGES

State Presidents—Miss Mary Louise Parker, Statesburg.

Local Presidents—Miss Mary McCalla, Greenville.

Miss Miriam Sanders

Miss Nancy Brockman

Miss Mary Bell

Miss Betty Powe

Miss Mary Anderson

GREENVILLE COUNTY HOSPITAL, BENEFIT ASSOCIATION

(Continued from page 71)

operating room, routine laboratory work, routine medicines and dressings, and X-ray service. If the subscriber desires private room accommodations, he will pay the hospital its regular rates, and the Association will allow a credit of \$3.00 per day up to twenty-one days in any one year following the date of contract. Hospital service does not include doctor's bill nor special nurse's bill.

The Association will begin operation at an early date. At that time it will make public all details of its service. Those persons who have worked for the organization of this Association feel that it is a fine step forward in giving hospital care to the people of Greenville County.—Reprinted from *The Bulletin of the Greenville County Medical Society*.

Dr. J. Lloyd Mims has resigned as Sumter county health officer to go to Washington where he will be associated with Dr. Robert Perkins.

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ATLANTA, GEORGIA

THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

April, 1941

NUMBER 4

Spontaneous Subarachnoid Hemorrhage

Report of Six Cases

EVERETT B. POOLE, M. D., GREENVILLE, S. C.

Subarachnoid hemorrhage, unassociated with trauma, hypertension, arteriosclerosis, or blood dyscrasia, is a condition of relatively frequent incidence. In a review of the records of Duke University Hospital, in the spring of 1935, six cases in which the diagnosis is unquestioned were found. The condition, for several reasons, assumes more than academic interest, chief of which lies in distinguishing it clinically from the other types of cerebral vascular accidents, and secondly in the differential diagnosis between it and syphilitic meningitis and tuberculous meningitis in the early stages. Furthermore, the treatment of this condition is different from that for the ordinary cerebral vascular accident; and the all important formulation of prognosis depends on an adequate understanding of the factors at work in this type of case.

For convenience, the cases to be reported herewith are divided into two types, those due to congenital aneurysms of the vessels in the circle of Willis, and those due to acquired defects in the vessel wall.

Of the first type, four cases are presented, one of which died in the hospital and came to autopsy. It is to be noted that these people were of the age group between twenty-five and forty-five; that there was no evidence of pre-existing generalized arteriosclerosis or hypertension; and that their histories, clinical and accessory findings, were very similar.

1. Mrs. S. P., a 45 year old white woman, entered the hospital on November 13, 1933, complaining of a frontal headache of one week's duration and an epileptic attack occurring at onset. The illness began with a severe occipital headache, followed shortly by a convulsive seizure, this in turn followed by stupor and a low grade fever, the excruciating headache being persistent. There were no localizing symptoms.

General and neurological findings were: slight haziness of the optic disc margins, normal retinal vessels, normal peripheral arteries, normal blood pressure, and complete absence of localizing neurological signs. There was definite meningismus, with moderate rigidity of neck muscles, and a positive Kernig's sign. She was stuporous and irrational. The blood Wassermann test was negative.

At the first lumbar puncture, done ten days after onset, the pressure was found increased; the fluid was yellow, there were 500 red blood cells and 400 white blood cells per cubic millimeter. Pandy and benzidine tests were positive; Wassermann reaction, negative. Another lumbar puncture, eleven days later, revealed normal pressure, 48 white blood cells per cubic millimeter, no red cells, but a positive benzidine.

Her course was one of gradual improvement. She was discharged, symptom free, with a normal blood pressure and without neurological residue, with a diagnosis of spontaneous

subarachnoid hemorrhage. This case is typical of one of the milder attacks.

2. C. S., a 26 year old colored male, entered the hospital complaining of sudden severe occipital and parietal headache, of eight days duration. There were no localizing symptoms. General and neurological examinations revealed no peripheral vascular disease. Blood pressure was normal. There were no localizing signs, nor meningismus, but moderate stupor. Spinal fluid pressure was increased on the two occasions lumbar puncture was performed. The fluid was yellow but revealed no red blood cells and no increase in leukocytes. The Pandy and benzidine tests, however, were positive, and the Wassermann reaction negative. This patient, likewise, improved and was discharged symptom free. It is wise to point out the value of the benzidine test in this case. Following the apparently small hemorrhage, all red cells had broken down, but their products remained to give a benzidine test showing that hemorrhage had occurred.

3. Mrs. E. S., a 33 year old white female, was admitted on the obstetrical service with a seventh month pregnancy; and was seen in consultation. She complained of sudden headache three days before admission, rapidly becoming excruciating; followed by a generalized convulsion.

The question of toxemia of pregnancy, as against subarachnoid bleeding arose, and medical consultation was asked. At this time the following findings were noted: Blood pressure was 148 over 88. There was a low grade fever. She had paralysis of the right oculomotor, trochlear, trigeminal, abducens, vagus, and facial nerves; the last being of the lower motor neurone type. She was mentally confused; there was definite meningismus. Spinal fluid on the third, sixth, and twentieth day after onset, was blood tinged and under increased pressure, gradually becoming entirely clear, with normal pressure, at the last puncture. She was delivered by Caesarean section and improved, with the facial weakness as the only residue, when she was last seen three months later. She was regarded as a case of spontaneous subarachnoid hemorrhage, rather than eclampsia.

4. W. A. J., a white male, aged thirty, was brought to Duke Hospital on April 7, 1935, with a history of sudden severe excruciating occipital headache nine days before admission, with paralysis of both legs one week later, and unconsciousness one day later. He had been treated for one week at another hospital, where frankly bloody spinal fluid had been withdrawn on numerous occasions. Upon admission to Duke Hospital, blood pressure was 136 over 86. There was flaccid paralysis of both legs, unconsciousness, and definite meningismus. Spinal fluid, at this time, was under increased pressure, with 7 red blood cells per cubic millimeter, and a negative benzidine test. He improved, regained consciousness and the use of his legs; but four weeks after the first attack there was a sudden convulsion followed by unconsciousness. He died three days later. Spinal fluid, under greatly increased pressure, was at this time grossly bloody. Autopsy by Dr. Wiley D. Forbus, revealed the following: There was a cerebral aneurysm at the junction of the right anterior cerebral and anterior communicating arteries. This aneurysm had ruptured. The base of the left frontal lobe was macerated. There had been a profuse subarachnoid hemorrhage; and an unruptured aneurysm of the right middle cerebral artery was found. Hemorrhage into the ventricles had occurred.

The pathological findings in this case are typical of the fundamental disease process in the three preceding cases. This type of aneurysmal disease has been recognized for some years. Undoubtedly it is congenital; and occurs in a perfectly characteristic fashion. The defect is one of the media and occurs in the angle formed between the limbs of the bifurcation of an artery. There is convincing evidence that this defect is not syphilitic in origin. The aneurysmal enlargement increases with the passage of years; the wall of the aneurysm becomes thin; and finally some form of exertion, such as stooping over, precipitates a rupture with subsequent hemorrhage, which, due to the location of the disease, immediately becomes subarachnoidal.

Two cases of the second general type are presented. Both are admittedly controversial;

the first showing an extraordinary series of incidents in a common disease; and the second perhaps belonging in the preceding group of four cases.

5. D. R., a 32 year old white male, entered the hospital complaining of sudden severe occipital headache of twenty-four hours duration. Blood pressure was normal. There were no localizing signs. Meningismus and slight stupor were present. Clinical and X-ray evidence of bilateral pulmonary tuberculosis, with cavitation, was elicited. The sputum was negative. The process was apparently inactive. Blood and spinal fluid Wassermann tests were negative. The spinal fluid showed blood, and was under increased pressure.

There was marked improvement following the bed rest and spinal puncture. After one week in the hospital, the patient insisted on going home, although he was strongly advised against it. One month later he had an identical attack, again returned to the hospital, where bloody spinal fluid under increased pressure was again found. There was the same prompt improvement, and he went home in two weeks with strict advice to remain in bed for six to eight weeks—which he did not follow.

Ten weeks after the second attack another illness of an entirely different character occurred. A generalized headache gradually developed, followed by high fever, mental confusion, and finally unconsciousness one week later.

Examination at this time revealed evidence of a frank meningitis. The spinal fluid showed 100 leukocytes, but no red blood cells; and the benzidine reaction was negative. His course was typical of tuberculous meningitis. He died three weeks after onset.

Autopsy revealed a frank tuberculous meningitis, along with generalized tuberculosis involving practically every organ in the body, except the heart and stomach. Careful examination of the brain revealed no evidence of subarachnoid bleeding. All the blood vessels were carefully dissected away from the base of the brain and no aneurysm of the previously mentioned type was found. At one point a small nodule appeared on one of the vessels, which was felt, with reasonable certainty, to be a small tubercle.

This man presented symptomatology identical with the four previous cases, and, were it not for the associated tuberculosis, would have been diagnosed clinically as they were. It seems highly probable that a small tubercle on the wall of a vessel did cause the episodes of hemorrhage that occurred.

6. H. G., a 41 year old colored woman, entered the hospital with a history of occipital headache, followed shortly by unconsciousness, five days before admission. There was meningismus, stupor, and a left hemiparesis. Spinal fluid was under increased pressure, and grossly bloody. The blood Wassermann test strongly positive, but the spinal fluid Wassermann test was negative. Her course varied little. She died twenty-one days after onset, with symptoms of respiratory failure.

Autopsy revealed multiple saccular aneurysms of the superficial cerebral vessels with rupture of an aneurysm of the right middle cerebral artery, this having been the site of the fatal hemorrhage. This aneurysm was located in the subarachnoid space. There was one small aneurysm at the junction of the left anterior cerebral and anterior communicating arteries. The pathology staff felt that syphilis was unlikely as a cause of the aneurysms, but that it could not be ruled out.

This case is similar to the first four in many respects, with these differences: The aneurysmal disease was not restricted to the region of the circle of Willis, but instead involved superficial vessels generally. There was the associated positive Wassermann test and, although it is the opinion of many pathologists that syphilis does not cause cerebral aneurysms, this etiology must be considered. There was in this case one junctional aneurysm. As previously indicated, it perhaps belongs in the first group.

Briefly, the clinical data of six cases have been reviewed. Four of these were observed closely by the writer. They exhibited sudden extravasation of blood into the subarachnoid space as the result in general of the same type of vascular disease. The similarity of symptoms and clinical findings is striking. First is the characteristic sudden occipital headache, described by some patients as feeling like a sledge hammer blow. This is followed by a low grade

fever and stupor or delirium. The meningismus which occurs is caused by the presence of blood in the meninges, acting as an irritant. Localizing signs are uncommon and, if present, consist of lower motor neuron cranial nerve palsies. Lumbar puncture completes the diagnosis.

Bloody, pink, or clear yellow spinal fluid, with the finding of red blood cells, a positive benzidine test, or both, clinches the diagnosis; and in the absence of trauma, hypertension, arteriosclerosis, or some blood dyscrasia, one can feel quite sure that one of the mechanisms described is responsible. Caution must be used in the performance of the lumbar puncture to prevent contamination by blood. As a further check, three successive tubes of four to five c. c. each must have the same appearance, and in doubtful cases, the same red cell count, to confirm the presence of blood, as part of the disease picture, and not as an accident incidental to spinal puncture. The spinal fluid pressure will usually be increased and therefore fluid should be withdrawn with caution, so that at the end of the procedure the final pressure is never below the normal of 100 mm. of water nor less than half the original pressure.

The prognosis of this condition is bad. If the first hemorrhage is not fatal, recurrence is the rule. The interval may be short, as in two of the cases, or quite long; but subsequent attacks are inevitable. One of these is likely to prove fatal.

At present, the only treatment consists of rest in bed and spinal puncture. As soon as the diagnosis is made, one should have no hesitancy in advising from four to six weeks of absolute bed rest, with a gradual resumption of activity thereafter. The family should be advised as to the probability of recurrence and should put the patient to bed if any headache occurs, calling the physician if it is severe or persistent.

Spinal puncture, following the precautions above, often relieves the headache miraculously. It may be repeated as often as necessary to relieve this symptom. Morphine should be used only as a secondary adjunct to spinal puncture and due to the state of affairs at the base of the brain near the respiratory controlling mechanism, should be given cautiously. Perhaps it should be accompanied each time by caffeine sodium benzoate, seven and one-half grains.

Life Expectancy

W. S. FEWELL, M. D., GREENVILLE, S. C.

The prime motive of the healing art is the prolongation of life. As physicians we are naturally interested in life expectancy and the various factors that affect it. Insurance companies with their vast amount of data have contributed much valuable information on this subject.

Insurance medicine and clinical medicine are by no means the same. Of course they are both based on the fundamentals of anatomy, physiology, and pathology. The basic operation of insurance medicine is a classification of individual applicants into groups, the mortality of which has already been determined from experience with similar groups. Nothing could be more remote from the art of clinical medi-

cine where the whole clinical structure is built around the individual patient. In underwriting, the individual disappears and the group emerges as the center of interest. Nothing is so uncertain as the life of the individual; nothing is more certain than the average life of a large group of individuals. On this fact the whole of insurance is based.

The American Experience Table has been adopted generally by the life insurance companies of America for rate computation. It starts with 100,000 individuals (males) at age 10; and indicates the number of deaths occurring each year; also the number surviving. From these basic figures the actuaries develop percentages expressing the probabilities of

death and expectancy of life; from which premium rates are calculated.

One medical director has illustrated this table by imagining an army of 100,000 children marching out in the field of life to engage in battle an army of death armed with all sorts of weapons. As this army of children marches forward in the early dawn, a heavy and continuous hail of bullets causes a terrific loss in the ranks of the marchers. The heavy firing is soon over, however; and for some time only an occasional shot is fired and few fall. Then there is a slowly increasing and concentrated firing until the sun of life's day is high in the heavens. As the afternoon progresses, the firing steadily persists. The ranks, grown thinner and thinner, there are now only a few marching toward the setting sun. The firing almost ceases. Some fall because of wounds received earlier; others from fatigue. As the sun of life sets, only one is left out of the hundred thousand; and he walks into the darkness with the feeble gait of a man ninety-six years of age. Going back over the field you can see how they died, when they died, and the manner of their deaths.

The fundamental factors of insurability are: personal history, race, occupation, environment, habitat, finances, and physical condition. Most of these factors are self evident, and require very little comment.

History: Strangely enough little stress is laid on family history by insurance companies. Extensive experience has shown that the effect of family history on mortality varies at most 15% below or above the average.

Race: Races vary in their mortality rates. Using 100 as the mortality for whites, 150 is the Japanese, 162 the Indian, and 175 the Negro. The figures are for these races when living in America.

Occupation: Occupational hazards are too numerous to discuss in this paper. Suffice it to say that farming is by far the most healthful occupation; and that unskilled labor in cities is the most hazardous of large groups.

Habitat: Geographical residence affects insurability considerably. Mortality of whites living in the tropics is twice that of those in the temperate zones. Mortality in our own Southern States is 24% higher than that of

the United States as a whole. The healthiest state in the Union is South Dakota; the most unhealthy, be it said to our shame, is South Carolina. The average expectation of life for white males in South Dakota is 64.38 years; in South Carolina it is 57.64 years.

Morals: In insurance, morals is used in its broader sense to include all of a man's habits. The one we are most concerned with is the use of alcohol. Insurance experience with alcoholics has been most unsatisfactory. Many factors enter into this problem. Why does the applicant drink? How much and how often does he drink? How does he behave when drinking? Over-indulgence in alcohol *per se* has very little demonstrable effect on the body. What then is it that kills alcoholics? Medico-actuarial experience shows that among alcoholics there are three times as many suicides as normal, twice as many deaths from pneumonia, and twice as many deaths from accidents. Occasional over-indulgence is of little consequence; steady free users are rated more severely; week-end drunks are uninsurable; as are spree drinkers, even though they get on sprees at rare intervals. Reformed drunkards are looked on askance by underwriters. They must have reformed for at least two years before they are considered.

Physical Condition: Insurance companies both individually and collectively have conducted numerous studies of the mortality experiences of their policyholders. Probably the most thorough of these is The Medical Impairment Study which embraces data of thirty-nine American and Canadian companies on issued lives during the years 1909 to 1927 inclusive. The total number of entrants with impairments was 1,100,000; the number of deaths 41,000.

The four principal causes of death are, first, diseases of the heart and blood vessels. Fifty cents out of every dollar that insurance companies pay out in death claims on ordinary policies is paid for diseases of the heart and arteries. Heart murmurs: Building insurance experience on the basis of heart murmurs rather than on the pathological condition present may seem illogical to clinicians; but insurance medicine does not attempt to make diagnoses. The medical underwriter considers

heart murmurs from their timing, where they are best heard, their constancy, and whether they are transmitted or not. The most common murmur encountered is the systolic murmur, heard best at the apex, and not transmitted. These have a mortality of 156% of the expected. Apical systolic murmurs transmitted to the left give a mortality of 234%. Aortic systolic murmurs show a mortality of 478%. Presystolic and diastolic murmurs show a 553% mortality. A history of rheumatic fever increases the mortality in heart murmur cases. Insurance companies have accumulated masses of statistics on blood pressure and they have worked out a table of average blood pressure readings from these statistics. When the readings are fifteen points above the average, the mortality is 153% of the expected; when twenty-five points above the average, 181% of the expected. Above twenty-five points, the mortality is 215% of the expected. In these cases, the apoplexy death rate was $3\frac{1}{2}$ times normal; organic heart disease $2\frac{3}{4}$ times; nephritis $2\frac{1}{2}$ times.

The second great cause of death is cancer. One woman in seven, and one man in nine after the age of forty will die of cancer.

The third major factor in mortality is external violence, including accidents, suicide, and homicide. The most costly type is, of course, the automobile accident, which accounts for 35,000 deaths annually; and half of these are due to the use of alcohol.

The fourth principal factor or cause of death is pneumonia; and it is with genuine joy that I tell you that the death rate from this disease has been cut more than half during the past year by the use of the new drug, sulfathiazole. Forty thousand lives are thus being saved annually!

The leading causes of unfavorable Home Office action are abnormal blood pressure, immoderate use of alcohol, heart impairments, morals and reputation, and over-weight. We have already discussed most of these but just a word here as to over-weight. Over-weight in the young is of little significance. However, the story is quite different in the older groups. In persons over forty years of age the mortality was 85% greater than expected in those who were 40% over-weight; and 140% more than

expected in those above 40% over-weight. In cases where the abdomen was more than $2\frac{1}{4}$ inches greater than the expanded chest, the mortality was materially increased. Belly fat is mortal fat! Few obese persons live to an old age. The fact that the obesity is a family characteristic in no wise changes the prognosis.

Space does not permit the giving of statistics on the many other degenerative and infectious diseases. The examples given are sufficient to show the accurate prognosis possible in large groups of adults with known impairments. These are the bullets that mow us down in the afternoon of life. And, sad to relate, many of these are the ones against which the physician stands almost helpless.

It is a familiar fact that the life span, that is, the extreme limit attainable by most sturdy individuals has been practically unchanged since the dawn of history, even though the average length of life of the population at large has changed very materially. Life expectation has increased from twenty-one years in Europe during the Middle Ages to approximately fifty-eight years in the United States at present. As we know, most of this improvement in mortality has occurred in the first few years of life. The man of forty today has practically the same life expectancy as did his remote ancestors when history was first recorded. The biblical three score years and ten continues to be the maximum span of life for the average rugged individual. It has been observed that the span of life for animals is five times the period required for them to reach maturity. Man matures at the age of twenty-one. Thus the span of life of *homo sapiens* should be one hundred and five years.

Physiologists tell us that the living cell, given the proper food and environment, is probably immortal. Few of us would care for earthly immortality. Yet, we can but hope that in the coming years, other Pasteurs and Ehrlichs will solve the mysteries that now shroud hypertension, myocardial and coronary disease, carcinoma, and the other captains in the hosts of death; and thus permit man to round out his years of usefulness and pass on, content in the knowledge that medical skill has enabled him to attain the age which nature intended.

Sulfathiazole in Staphylococcus Infections

Report of Three Cases from the Greenville General Hospital

A. C. PARKER, JR., M. D., AND HUGH SMITH, M. D., GREENVILLE, S. C.

The summer of 1940 brought another brilliant addition to the field of chemotherapy. We had just become accustomed to the spectacular results of sulfanilamide in streptococcal infections and to sulfapyridine in pneumococcal infections and were bemoaning the fact that neither had proven very effective in staphylococcal infections when sulfathiazole was announced. At the very time it became available we had two patients in the Greenville General Hospital seriously ill with staphylococcal infections and both had received sulfanilamide and sulfapyridine without relief. One was desperately ill with a staphylococcal septicemia and her recovery was spectacular indeed. The other was equally as gratifying. A boy gravely ill with an acute osteomyelitis became comfortable and experienced a rapid and uneventful postoperative convalescence with the exhibition of this drug. The third case followed shortly and, while entirely different in its type and severity, it serves to illustrate the effectiveness of this drug in combating a chronic, disabling staphylococcus citrus cellulitis.

CASE REPORTS

1. A negro woman, age 24, was admitted July 14, 1940 with chills, septic fever, and soreness over the chest. She had been sick ten days. The onset was acute and without previous illness, injury, or known infection. Physical examination on admission was entirely negative except for a vaginal discharge and tenderness in the left fornix. The white count on admission was 103,000—done the second time and confirmed — with 94% polys. Hemoglobin 51%. Temperature rose to 104 on July 14th, 105.8 on the 15th, and ranged from 99 to 105 daily thereafter until the 20th. She was given neo-prontosil and sulfanilamide on the 17th after blood cultures had been obtained. The blood cultures on successive days were positive on the 17th and 18th for staphylococcus aureus. Leukocyte counts of 103,000 on the

15th, 45,000 on the 17th, 65,000 on the 19th, and 33,000 on the 21st were reported. In spite of treatment with sulfanilamide for four days, followed by sulfapyridine for the next ten days, and staphylococcal toxoid and repeated transfusions, she continued to have chills and septic fever. By July 21st the hemoglobin was down to 34%. On July 30th we were able to get sulfathiazole for her. On August 2nd, after three days of the drug, the temperature reached only 100.0 and on August 4th the temperature was normal. Except for a short elevation to 103 on August 6th after a transfusion, it was normal from August 4th to August 9th, when it again became hectic. She then ran a daily temperature to 104-105 with double spikes; that is, a morning and afternoon peak through August 13th. The blood cultures were then negative and sulfathiazole was discontinued. The temperature became normal within forty-eight hours after stopping sulfathiazole and remained so throughout the next three weeks, when she was discharged well. She has remained well for seven months now and has been at work since shortly after her discharge last September. We were convinced that the temperature flare from August 9th through the 13th was due to the drug and this has subsequently been seen in other cases treated with sulfathiazole.

Case No. 2

A white boy of fourteen was admitted to the Greenville General Hospital from one of the nearby mountain camps on July 18th, 1940, with fever, headache, and indefinite abdominal pain. He had been perfectly well until two days before. Physical examination was entirely negative except for a few small abrasions, with small pustular crusts, about the feet. On admission the leukocyte count was 7,000 with 57% polys., 6% transitionals, and 37% lymphocytes. His urine showed albumin two plus, 4-6 leukocytes and 0-2 red cells per

high power field. Blood cultures and smears for malaria were negative. His temperature suggested typhoid fever and this was the tentative diagnosis. The Widal reaction was negative and other agglutinations were also negative.

A urine culture was positive for staphylococcus aureus.

On July 22nd he first complained of pain about the right knee and this rapidly increased. A diagnosis of osteomyelitis became apparent. Sulfapyridine was started on the 22nd and no response was noted. On July 25th the right femur was drained, with frank pus obtained. The culture of this pus showed staphylococcus aureus. We were able to obtain sulfathiazole for him the day after operation and he was afebrile on the sixth postoperative day. From this time his convalescence was remarkably smooth and uncomplicated. Later, after his return home, we learned that a small splinter had worked out of a small pustular area near the heel of one foot. This was no doubt the portal of infection. This boy has remained well and is now reported as back in school and as active as ever.

Case No. 3

A member of the Greenville General Hospital staff began having recurrent furunculosis and episodes of cellulitis of the right hand and forearm in the summer of 1940. He suffered a good deal and after several weeks of such infections he was unable to carry on his duties.

He had used various applications, hot packs, etc., and had finally resorted to splints and a sling. In October we gave him very small doses of neo-arsphenamine (0.3 to 0.4 grams) with apparently good results after the first two injections, but a prompt flare-up after the third injection of 0.45 grams. Cultures from the skin lesions revealed a staphylococcus citrus infection and, after the failure to respond to neo-arsphenamine, he was given sulfathiazole with almost dramatic relief. The lesions healed in five days and now after four months there has been no recurrence, though he is again active in his medical duties and scrubbing often for operative procedures.

In summary: Three cases of staphylococcal infection of different severity which responded perfectly to treatment with sulfathiazole are briefly reported. The case of staphylococcus septicemia would most probably have died without this drug. The case of acute osteomyelitis healed much more quickly and kindly than any similar case in our experience before the advent of sulfathiazole. The case of chronic and resistant furunculosis and cellulitis had proven resistant to all ordinary methods of treatment and then promptly and finally healed under treatment with sulfathiazole.

In the last quarter century we have seen the world at war twice. In that same period we have seen dramatic advances in medicine—such discoveries as insulin, liver therapy, sulfanilamide, sulfapyridine, and sulfathiazole, have occurred. Quo Vadis!

Lieut. Ralph E. Brown, Barnwell, has been called to active duty in the Medical Corps.

Dr. Hugh Cathcart of Charleston, now completing a rotating internship in Philadelphia, has been awarded a three-year fellowship in surgery at the Mayo Clinic.

On March 7th, Dr. T. A. Pitts of Columbia was principal speaker at a banquet of the Phi Rho Sigma Fraternity, preceding the Annual Ball of the Medical College.

It is reported that the new Catholic Hospital in Dillon will comprise 50 beds, 14 of which will be for negroes. Construction was scheduled to begin in the middle of March.

The New York Post-Graduate Medical School announces a special five-day course on "Recent Advances in Tropical Medicine" from May 19th through May 23rd. Dr. Z. Bercovitz is directing the course. A number of physicians eminent in the field of tropical medicine will lecture. Because of the possibility of American troops going to tropical countries, this course may well have special interest.

Dr. D. W. Green of Conway will begin his naval service as Lieut.-Commander at the Naval Hospital, Navy Yard, Charleston. Dr. Green is a veteran of the World War and was at one time located at Mullins. For ten years he has been located in Conway. He has been active in civic affairs in Conway and is a former commander of the local American Legion post.

Congenital Malformation of the Anus-- Operative Cure

G. T. TYLER, JR., M. D., GREENVILLE, S. C.

In 1923, E. C., a white female infant three weeks old, was brought to me because the mother noticed that feces escaped, not from the anus, but from an opening just behind the vaginal orifice.

On examination, the otherwise normal infant had the anal opening in the perineum, just behind the fourchette. The anal dimple was present. A curved clamp introduced through the opening was felt at the anal dimple. A longitudinal incision about 2 cm. long was made through the skin at this point; the edges were spread; the rectum entered; and the mucous membrane sutured to the skin at the four quadrants. The result of this procedure was satisfactory. Bowel movements came through both openings.

From time to time, the newly made anus was dilated with the finger. It seemed that about as much feces escaped through this as through the original opening. The patient was never incontinent. The dilatations continued until the child was six years old; when she stopped coming. Ten years later, she returned requesting operation. Her general condition was good; but she had become reticent and retiring because it was difficult to keep herself clean. The two openings were still present. The anus easily admitted the index finger. Sphincter tone was good. The finger in the anus, when flexed toward the anterior, could be seen protruding from the original opening.

Under anesthesia, pelvic examination revealed no deformity of uterus and adnexa. Operation was then begun. The mucosa from the original opening was dissected from the perineum beneath the vaginal floor, and well up beyond the sphincters. Dissection was carried higher in the front and on the sides than in the rear. The anterior half of the anus was then outlined; and the mucosa dissected anteriorly and laterally beyond the inner edge of the sphincters to meet that portion of the canal dissected from the perineum. This peri-

neal portion was brought down within the sphincters. The gut was too long, and the lumen too large. Its wall was sutured at the three quadrants to the external sphincter slightly rolled out; so that in retracting, the muscle would draw it up. A longitudinal wedge was excised to reduce the lumen. Attachment to the skin was made as in the Whitehead operation. As much skin as possible was conserved at the anus to avoid protrusion of the mucous membrane. The bolbo-cavernosus muscles and the overlying fascia were then brought together. The skin was closed with a subcutaneous suture. A thick perineal body resulted.

The bowels were kept inactive for nine days; when digital examination revealed a fecal mass in the anus. This was finally broken up by oil enemas, mineral oil by mouth, and by digital effort. Afterwards the bowels were moved by castor oil and enemas.

The final result is all that could be desired. There is no stricture at the anus; the perineal body is thick and strong; sphincter control is good; and the patient is happy.

No originality is claimed for the procedures used in this case. A few comments, however, are pertinent:

1. Lead and opium pills, one three times a day, kept the bowels constipated, and the patient comfortable.
2. Separation of the mucous membrane from only the anterior of the anus prevents the formation of anal stricture.
3. Preserving the skin as much as possible at the anal orifice lines the opening at this portion with skin. Mucous membrane does not protrude to keep the area continually moist, and the patient uncomfortable.
4. It is better to delay the second stage of this operation until the patients have reached adolescence; because the structures are larger; identification and dissection are much easier at this time than in infancy.

State Meeting of South Carolina Medical Association

W. L. Pressly

Plans and program for the meeting of the South Carolina Medical Association have been completed. The meeting this year will be held in Greenville on April 15, 16, and 17 at the Poinsett Hotel, and it promises to be the largest attended in the history of the Society. The Greenville County Medical Association has most carefully and thoughtfully made plans for this meeting. The most minute care has been taken looking forward to your comfort and happiness.

I have met with the various committees from time to time, and the spirit of cooperation has been most encouraging. On the night of February 17 a joint meeting of all committees was held at Dr. Warren White's Paris Mountain home, and I believe every member of each committee was present—surely a most unusual attendance record. The Scientific Committee has worked hard to give us a most interesting and stimulating program.

The House of Delegates will convene Tuesday, with meetings in the afternoon and evening. This is a very important meeting as many vacancies must be filled—editor of the Journal, secretary and treasurer, delegate to A. M. A., and the usual officers of the Society. We must all give this our most careful thought.

Wednesday, February 16, will be a very full day. We are very fortunate to have Dr. Frank Lahey as our guest speaker in the morning session. As you know, Dr. Lahey is President-elect of the American Medical Association and probably the most sought after speaker on medical subjects in America today. He will also address the House of Delegates on Tuesday evening. Wednesday afternoon will be given over to clinics. Dr. O. L. Miller, President of the American Orthopedic Society, assisted by the members of the Fracture Committee, will conduct the Fracture Clinic. We are insisting that this clinic will cover the everyday problems that confront the general practitioner. Dr. A. B. Cannon, Professor of Dermatology, Columbia University, will conduct a Skin Clinic and lecture on the common skin diseases. This clinic will deal with diagnosis and treatment of the skin diseases we see daily in our offices. I feel very positive that these clinics will prove most helpful to all, especially to the man doing general work. A new feature of entertainment this year will be the banquet Wednesday night followed by the annual ball. Dr. E. A. Paullin will make an address as Chairman of the Fourth Corps Area on Medical Preparedness. We will also have another noted speaker, name to appear later. Thursday Dr. David Smith of Duke University will be the guest speaker. You can always count on David Smith for a fine talk. He will speak on *Acute and Chronic Non-Tuberculous Diseases of the Chest*.

The membership of the Society is now at an all-time high. Begin now to make your plans to attend. The Association needs you and you need the Association. Better make your reservations early—Poinsett, Greenville, or Otteray Hotels. Hope to see each of you in Greenville. Remember the date—April 15-17.

May I take this opportunity to thank you again for the privilege of serving you during the past year.

THE JOURNAL

OF THE

South Carolina Medical Association

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Original manuscripts, subject to approval by the Editor and the Departmental Editors, are desired for publication in the Journal. They should be typewritten, double spaced, on 8½ x 11 paper. References should be complete, and only such as relate directly to statements quoted in the paper. Illustrations will be used as funds permit, or as authors are willing to bear the necessary increase in cost. Short original articles are preferred to long reviews. Reports of Society meetings and news items are desired.

OFFICE OF PUBLICATION

Medical Building ----- Seneca, S. C.
 Subscription Price ----- \$3.00 Per Year

APRIL, 1941

INVITATION FROM THE GREENVILLE COUNTY MEDICAL SOCIETY

March 6, 1941.

With the advent of Spring, our thoughts turn with happy anticipation to the State Medical Meeting which will be held in Greenville, April 15-17. We are proud to be the hosts to the members of this Association and to its Auxiliary. I want to extend to every doctor and his wife a cordial invitation to be with us at this meeting, which we are striving to make a most enjoyable and profitable occasion. It will be the pleasure of our local society to extend to you every courtesy and favor within our bounds.

C. C. ARIAIL, President
 Greenville County Medical
 Society.

THE BANQUET

The Greenville Committee has made an innovation at the annual meeting in the form of a banquet for members and their wives. This will be held on Wednesday evening at the Poinsett Hotel, preceding the usual President's Ball. There will be an address by Dr. Frank Graham, President of the University of North Carolina.

This banquet is being given to the Association through the courtesy of Mr. Frank Hipp, President of the Southeastern Life Insurance Company and the Liberty Life Insurance Company of Greenville. Mr. Hipp has offered this entertainment and hospitality as a mark of appreciation of the work of the medical examiners for his companies. His generous gesture should be esteemed highly by the Association.

THE SCIENTIFIC PROGRAM

The Greenville Committee, under Dr. Jack Jervey, has produced a most attractive program. Our own members offer a variety of material, and the invited speakers are well-known and most worthy of a large hearing. Attendance at the sessions is expected to eclipse all past records.

BOOKS ON THE DOCTOR

The recent crop of autobiographical books on the doctor's life—whether spent largely in a buggy, or in surroundings typifying the highest development of modern medicine—has given much pleasure to the public in general and to doctors in particular, although the latter group might find some few pains among the pleasures.

Debunking proceeds at a right rapid rate, even to the point of taking off a little skin with the bunk. It may be that "Hilton Head," by Josephine Pinckney, will offer a welcome change of interest, for it goes back to a more romantic view of the physician's life. In this instance, the strange and varied adventures of Henry Woodward, South Carolina's first physician, are brought out in an historical novel concerning his extraordinary career as a doctor, explorer, privateer and captive among the Spaniards in St. Augustine.

The reviewers have found it good. The NEW YORK TIMES says, "it holds us because Dr. Henry Woodward emerges as a real and puzzling human being—fallible, likeable, hopeful, earnest, courageous," in short, as a character worthy of better acquaintance among his Carolina confreres.

The Accommodation Committee presents the following report:

The annual meeting of the South Carolina Medical Association will be in Greenville on

April 15-17, 1941. The Poinsett Hotel will be headquarters for the convention. Requests for reservations should be sent to the following hotels or to the chairman of the Accommodation Committee.

There are three hotels in Greenville. Rates for the Convention are:

Poinsett Hotel

Single room with bath \$2.50—\$4.00 per day
Double room with bath 2.00— 3.50 per day
Triple room with bath 1.75— 3.00 per day

Ottaray Hotel

Single room with private bath \$2.00—\$3.00 per day
Double room with private bath \$3.00—\$4.50 per day

Hotel Greenville

Single room with private bath \$2.00 per day and up
Double room with private bath \$3.50 per day and up

J. L. Sanders, M. D.,

Chairman Accommodation Committee
222 N. Main St., Greenville, S. C.

FINANCIAL STATEMENT OF DR. J. P. PRICE SECRETARY-TREASURER 1940

Dr. Tom Pitts
Chairman of Council
S. C. Medical Association
Columbia, South Carolina

Dear Dr. Pitts:

In accordance with custom I am submitting, herewith, the annual financial statement of the South Carolina Medical Association and the Journal of the South Carolina Medical Association for publication in the issue of the State Journal before the annual meeting.

Although an attempt is made to keep separate accounts for the State Association and Journal funds there is of necessity an interchange of the funds. This is due to the fact that the Journal receipts are far in excess of those in the State Association and larger demands are made upon this account. For this reason the separate statements of the Journal and Association funds are misleading and the true picture is obtained in the combined statement which I am submitting. The separate statements of the Association and Journal have been sent to each member of Council and I will be glad to send a copy to any member of the House of Delegates or State Medical Association upon request.

COMBINED STATEMENT OF RECEIPTS AND DISBURSEMENTS OF THE SOUTH CAROLINA MEDICAL ASSOCIATION AND THE JOURNAL OF THE SOUTH CAROLINA MEDICAL ASSOCIATION FOR THE YEAR ENDING DEC. 31, 1940

RECEIPTS

Balance in Banks Jan. 1, 1940	
Defunct Seneca Bank*	
S. C. National Bank	\$2,774.80
Postal Savings	1,000.00
	\$ 3,774.80
Membership Dues	2,424.00
Subscriptions	2,424.00
Advertising	2,964.07
Sundries	32.27
	\$11,619.14

DISBURSEMENTS

Salary Secretary-Editor	\$ 2,050.20
Traveling Expense Secretary-Editor	190.00
Salary Stenographer	600.00
Office Expense	246.27
Rent	180.00
Office Equipment	135.75
Stamps	71.50
Printing — Journal	2,360.00
Convention Expense	129.44
Expenses Guest Speakers	144.15

Expenses Official Stenographer		Postal Savings -----	1,000.00	
Convention -----	100.00			4,636.48
Travel Expense Two Delegates American Medical Association -----	246.80			\$11,619.14
Expenses Legislative Committee -----	35.00	Assets as of Dec. 31, 1940		
Bronze Tablet—150th Anniversary South Carolina Medical Society (Charleston) --	55.00	Cash in Banks and Postal Savings -----	4,636.48	
Appropriation for Historical Committee --	100.00	Appraised Value Office Furniture and Fixtures -----	1,100.00	
Clerical Work—Medical Preparedness ----	90.00			\$ 5,736.48
Annual Audit -----	25.00			
Sundries -----	223.55	*Defunct Seneca Bank		
		Value on Paper -----	\$1,058.50	
		Cash Value -----	?	
Balance in Banks Dec. 31, 1940		Respectfully submitted,		
Defunct Seneca Bank*		Julian P. Price, Secretary-		
S. C. National Bank -----	\$3,636.48	Treasurer, S. C. Medical Association		

SOUTH CAROLINA MEDICAL ASSOCIATION STANDING COMMITTEES

Committee on Scientific Work

Dr. J. W. Jervy, Jr., Chairman -----	Greenville
Dr. J. D. Guess -----	Greenville
Dr. Gertrude Holmes -----	Greenville
Dr. W. L. Pressly, President -----	Due West
Dr. J. P. Price, Secretary -----	Florence

Committee on Public Policy and Legislation

Dr. J. McMahan Davis, Chairman -----	Columbia
Dr. Frank C. Owens -----	Columbia
Dr. I. Jenkins Mikell -----	Columbia

Committee on Public Health and Instruction

Dr. H. Grady Callison, Chairman -----	Columbia
Dr. R. M. Pollitzer -----	Greenville
Dr. L. D. Boone -----	Aiken

Committee on Medical Economics

Dr. W. H. Poston, Chairman -----	Pamplico
Dr. J. R. Powers -----	Abbeville
Dr. W. G. Bishop -----	Greenwood

Committee on Necrology

Dr. J. R. Des Portes, Chairman -----	Fort Mill
Dr. J. B. Johnston -----	St. George
Dr. J. P. Price, Secretary -----	Florence

SPECIAL COMMITTEES

Committee on Maternal Welfare

Dr. Robt. E. Seibels, Chairman -----	Columbia
Dr. J. D. Guess -----	Greenville
Dr. Lester A. Wilson -----	Charleston
Dr. P. J. Boatwright -----	Orangeburg
Dr. R. B. Bultman -----	Sumter
Dr. Herbert E. Blake -----	Anderson
Dr. James A. Sasser -----	Conway
Dr. Jno. M. Fleming -----	Spartanburg

Committee on Control of Cancer

Dr. F. E. Kredel, Chairman -----	Charleston
Dr. J. R. Allison -----	Columbia
Dr. C. J. Scurry -----	Greenwood
Dr. Hugh Smith -----	Greenville

Dr. R. E. Abel -----	Chester
Dr. L. B. Salters -----	Florence
Dr. C. R. F. Baker -----	Sumter
Dr. C. A. Mobley -----	Orangeburg
Dr. C. L. Guyton -----	Columbia

Committee on Study and Control of Syphilis

Dr. J. E. Boone, Chairman -----	Columbia
Dr. Paul W. Sanders -----	Charleston
Dr. Orion T. Finklea -----	Florence
Dr. Keitt H. Smith -----	Greenville
Dr. Everett E. Herlong -----	Rock Hill

Committee on Public Relations

Dr. William Weston, Jr., Chairman -----	Columbia
Dr. Douglas Jennings -----	Bennettsville
Dr. John Rainey -----	Anderson

Committee on Historical Medicine

Dr. J. I. Waring, Chairman -----	Charleston
Dr. R. E. Seibels -----	Columbia
Dr. J. P. Price -----	Florence

Committee on Medical College of the State of South Carolina

Dr. L. M. Stokes, Chairman -----	Walterboro
Dr. W. J. Bristow -----	Columbia
Dr. D. L. Smith, Sr. -----	Spartanburg
Dr. T. H. Pope -----	Newberry
Dr. J. R. Des Portes -----	Fort Mill
Dr. R. B. Durham -----	Columbia
Dr. C. C. Ariail -----	Greenville
Dr. E. T. Kelley -----	Kingstree
Dr. L. P. Thackston -----	Orangeburg
Dr. W. C. Hunsucker, Secretary -----	Bennettsville
Dr. G. M. Truluck, President Elect -----	Orangeburg

South Carolina Cancer Commission

Dr. K. M. Lynch, President -----	Charleston
Dr. P. M. Temples, Secretary -----	Spartanburg
Dr. E. E. Herlong -----	Rock Hill
Dr. William S. Judy -----	Greenville
Dr. James McLeod -----	Florence
Dr. Floyd D. Rodgers -----	Columbia
Dr. James R. Young -----	Anderson

Greenville, South Carolina

PROGRAM

HOUSE OF DELEGATES

The Poinsett Hotel

3:00 p. m. Tuesday, April 15, 1941

Call to order by the President, Dr. W. L. Pressly.

Remarks by the President.

Remarks by the President-Elect, Dr. Geo. Truluck.

Report of Secretary, Dr. J. P. Price.

Report of Editor of Journal, Dr. J. I. Waring.

Report of Board of Councilors, Dr. T. A. Pitts.

Report of Board of Health, Dr. K. M. Lynch.

Report of Delegates to A. M. A., Dr. J. H. Cannon.

Report of State Board of Medical Examiners, Dr. A. E. Boozer, Sec.

Committee Reports

Scientific Work.

Publicity and Legislation.

Public Health and Instruction.

Medical Economics.

Maternal Welfare.

Control of Cancer.

Study and Control of Syphilis.

Public Relations.

Historical Medicine.

Medical College of the State of S. C.

Report of Cancer Commission.

Introduction of New Business.

Miscellaneous Business.

Report of Committee on Resolutions.

Election of Officers.

Adjournment.

(The Committee on Credentials will convene at 2:30 P. M. Delegates should obtain credentials from County Secretaries before leaving home).

The Council will meet at 10:30 A. M. at the Poinsett Hotel.

SUMMARY OF THE PROGRAM

April 15, 16, and 17, 1941

Tuesday, April 15

10:30 A. M. Council meets at Poinsett Hotel.

3:00 P. M. House of Delegates meets at Poinsett Hotel.

Wednesday, April 16

9:00 A. M. Scientific Session begins.

Report of Committee on Necrology—Dr. Des Portes.

Papers by members.

Address by Dr. Frank Lahey of Boston.

Subject: "Thyroid Disease."

Papers by members.

1:00 P. M. Alumni Luncheon.

Afternoon Session

2:30 P. M. Dr. A. B. Cannon, New York, will conduct a clinic on "Common Skin Diseases."

4:00 P. M. Dr. Oscar L. Miller, Charlotte, will conduct a discussion on "Fracture Treatment by the Non-Specialist."

Evening

Banquet—Poinsett Hotel.

Address by Dr. Frank Graham.

Thursday, April 17

9:00 A. M. Papers by members.

Address—Dr. David T. Smith on "Subacute and Chronic Non-Tuberculous Lung Infection."

A SKETCH OF THE HISTORY OF GREENVILLE

The site of the present City of Greenville belonged to the Cherokee Indians until the year 1777. When the Revolutionary War began, these Indians remained loyal to the English King and hence the Whigs of South Carolina conducted a military campaign against them which ended in the defeat of the Cherokees and the surrender of their lands, in what is now the Northwest Corner of South Carolina.

Probably ten years previous to this session, an Irishman named Richard Pearis came down from Virginia and obtained a grant for a

large tract of land from these Indians. He located at the falls of the Reedy River somewhere near the present Main Street bridge in the City of Greenville. Here he established a trading post, built a grist mill, took a Cherokee squaw as his wife, and became a man of influence and power with the Indians. His land included the beautiful mountain about the city which still bears his name. He, too, took the side of the King and lost his land as a result of the war.

Immediately after the close of the Revolution settlers poured into this newly-acquired Indian land and in 1786 the Legislature of South Carolina created the County of Greenville, with boundaries almost the same as it now retains. When the first census of the United States was taken four years later, the County had 965 families with a total population of 6,503.

But still the County had no regular seat of government. Citizens began to petition the Legislature for a permanent place to hold court and keep the records. After a few years of wrangling a site was selected on the banks of the Reedy River just above the falls where Pearis had previously settled. The land now belonged to Lemuel James Alston, who came from North Carolina in 1784 and acquired title to the land on which the new county seat was to be built. Alston had the land surveyed in 1797 and a number of streets were marked out with adjoining lots for sale. He gave the new real estate development the name of Pleasantburg, but the newly erected courthouse in the center of the main thoroughfare determined that the new town would be called Greenville Courthouse; and so it was officially designated down to relatively recent years. The original square is still easily located by the position of the buildings in the vicinity of the present Court House on Main Street.

The town was named for the County but there has been a long standing dispute as to whether the name was given in honor of General Nathanael Greene, of Revolutionary fame, or for the verdure of the surrounding country. There is abundant evidence to prove that at least the early citizens wanted the town to derive its name from the great Revolutionary

general—although the spelling is slightly different.

The little village around the Court House grew very slowly at first but the State built a road over the Saluda Mountain in the early 1820's. The engineer was Joel R. Poinsett, an outstanding South Carolinian, and evidence of his good work can still be seen in the Poinsett bridge in upper Greenville County. This road stimulated a flourishing trade with the West and Greenville became an important point on the route from Kentucky, Tennessee and Western North Carolina to the markets of Augusta, Savannah and Charleston.

The healthful climate also attracted many visitors from the coastal country and a number of them became permanent residents or spent their summers in or near the village. Among these were Joseph Alston and his brilliant wife, Theodosia Burr Alston. In writing her father, Aaron Burr, she said of Greenville, "That climate agrees perfectly with me and my son, who went there with a bilious fever, and has returned with brilliant roses." The resort business stimulated the building of a number of outstanding hotels including the famous Mansion House. In speaking of this popular hostelry a world traveller said that it "comes as near to our beau ideal of a perfect village hotel as any we have elsewhere encountered. . . The quiet, the neatness, the taste, the viands and the courteous treatment which the visitor finds there, will haunt him for days after with a spell." After many years of service this hotel was replaced by the present Poinsett Hotel which carries on the tradition of the past. Near Greenville, Doctor Burril Chick built the noted Chick Springs Hotel. The excellent water and the ample accommodations attracted many and it became the largest hotel in this section of the country.

Greenville still boasts of its marvelous climate, and its water supply, from the nearby Blue Ridge Mountains, is unsurpassed by any city in the land.

In 1815 Lemuel Alston sold his large land holdings to Vardry McBee, of Lincolnton North Carolina. This enterprising and public-spirited citizen may rightly be called the father of manufacturing in Greenville. He founded a number of industrial establishments in and



DR. DAVID T. SMITH

David Tillerson Smith, M. D. Bacteriologist. Born Anderson County, S. C., 1898. A. B. Furman University, Greenville, S. C., 1918. M. D. Johns Hopkins 1922. Intern in pediatrics Johns Hopkins Hospital 1922-23; asst. in pathology and bacteriology Rockefeller Institute 1923-24; bacteriologist, pathologist and director Research Laboratory, N. Y. State Hospital for Tuberculosis, Ray Brook, N. Y. 1924-30; prof. bacteriology, asso. prof. medicine, Deke Hospital, Durham, N. C. 1930.

DR. FRANK H. LAHEY

Frank H. Lahey, M. D., Harvard College, 1904; Professor of Surgery Tufts Medical School 1913-1917; Director of Surgery A. E. F. Evacuation Hospital No. 30, Major Medical Corps, World War; Professor of Clinical Surgery Harvard Medical School 1923-24. At present Director Surgery Lahey Clinic, Boston; Surgeon-in-Chief, New England Baptist Hospital, Surgeon-in-Chief, New England Deaconess Hospital. Member of the American Surgical Society, International Surgical Society, Board of Governors of American College of Surgeons, President-elect of American Medical Association.



around the town, and by generous contributions helped to start a number of institutions which contributed to the culture and religious life of the Community. Among his enterprises was a wheat mill, a cotton factory, and a paper mill.

The transportation problem was the greatest that the community had to work out. After three unsuccessful attempts a railroad was finally secured to Columbia in the early 1850's, and with its completion the success of the town was assured. The village now grew rapidly and had a bright future when the War between the States stayed the hand of progress for almost a generation.

The little town was so interesting in the ante-bellum period that one cannot refrain from relating a few outstanding features of its history. On the political side the most exciting episode was the contest over Nullification from 1828 to 1835. The leader of the Nullifiers was Waddy Thompson, later Congressman and Minister to Mexico, and the leader of the Union Men was Benjamin F. Perry, later Provisional Governor of South Carolina. The latter was editor of the local paper, *The Greenville Mountaineer*, and used its columns with telling effect. A rival paper, *The Southern Sentinel*, was founded but the editor soon lost his life in a duel. The Union Men won in Greenville and this section continued to be the most active part of the state in opposition to secession. However, when the State seceded the people supported the Confederacy in a loyal manner. One of the leaders in opposition to Nullification at the time was a young citizen of Greenville by the name of William Lowndes Yancey. He later moved to Alabama and changed front, becoming one of the most rabid leaders of the Secession Movement.

The little town had its social side also. It had a library, lyceum society, little theatre, museum and week of horse racing. The Male and Female Academies were among the best in the State. In 1851 the Baptists decided to remove The Furman Theological Institute from near Winnsboro to Greenville, and this was the beginning of Furman University. In 1854 the same denomination decided to establish a Female College on the property of the Greenville Academies and thus the Woman's College began. During this period Christ Church, the

First Baptist, the Methodist and First Presbyterian Churches were founded in the order named.

Probably the most interesting economic venture of the antebellum period was the Coach Factory of the Gowers and Cox. At the outbreak of the War between the States it was the largest manufacturing plant of Carriages and Wagons in the South.

The War left Greenville in a terrible condition as it did the State in general. It was not in the line of marching armies but Stoneman's Cavalry visited it and took what they wanted. Union soldiers were also stationed here for a while after the War.

B. F. Perry, Greenville's leading citizen at the time, became Provisional Governor of the State but was soon supplanted due to the Congressional plan of military rule.

After the dark days of radical rule Greenville began to slowly recover. In the late 1870's Henry Pinkney Hammett was able to organize and begin the operation of a large scale cotton mill. This was the revival of an industry which was soon to become the life blood of Greenville, and cause it to grow from a small village to the largest metropolitan area in the State. Capital came, locally and from the North, better railroad connections were made, and Greenville fast became "The Textile Center of the South."

During the World War Greenville was the home of Camp Sevier, a soldier center as large as the civilian city.

Since that time Greenville has made steady growth, both in industry and social life. The public school system, which began in the 1880's has expanded rapidly and has become one of the best in the South. The hospitals, public library, the churches and civic life in general demonstrate that Greenville is a progressive and dynamic community.

GREENVILLE

*Prepared by Mr. M. L. Glenn,
Secretary of Chamber of Commerce*

The center of the vast cotton textile manufacturing industry of the South, Greenville years ago earned the slogan, "Textile Center of the South."



Dr. W. L. Pressly
President of the South Carolina Medical Association

Within a radius of 100 miles of the city there are 467 cotton mills, with 3,176,638 spindles, 162,618 looms, and 9,361 knitting machines.

In Greenville County alone there are 35 cotton textile plants, capitalized at more than \$39,000,000. These plants turn out annually products valued at approximately \$50,000,000. Last year the average daily employment in textile mills of Greenville County amounted to 15,120 persons, who received in wages nearly \$13,000,000.

Fabrics woven in Greenville mills range from the heaviest duck to the finest of fancy rayon and cotton dress goods, voile, shirtings, gingham, bed spreads, handkerchief cloth, etc.

While Greenville is known throughout the nation for the extent and variety of her textile industries, manufacturing is not confined wholly to cotton. There are in Greenville machine shops and foundries, establishments for the manufacture of loom harness, reeds, shuttles, shuttle blocks, bobbins and other textile equipment; leather belting, men's shirts, women's and children's dresses, handkerchiefs, men's clothing, underwear, concrete pipe, mattresses, peanut products food specialties, baseball bats, automobile brake bands, etc.

While the county's textile industry is highly important, Greenville enjoys the distinction of leading all counties of South Carolina in volume of both retail and wholesale trade. Latest available data from the U. S. Department of Commerce show the following volume of retail trade for the four top counties of South Carolina.

Greenville County	\$37,737,000
Richland County	35,128,000
Charleston County	32,781,000
Spartanburg County	27,190,000

Figures as to volume of wholesale trade by the four top counties of South Carolina are even more impressive. According to the Census Bureau records, wholesale trade done by the four leading counties of the state is as follows:

Greenville County	\$58,862,000
Richland County	47,442,000
Charleston County	36,196,000
Spartanburg County	25,387,000

Not only is Greenville County supreme among counties of South Carolina in the fields of retail and wholesale trade, but the county occupies an enviable position among counties of North Carolina and Georgia. Of the 307 counties in the two Carolinas and Georgia, the county of Greenville ranks fourth in volume of retail and fifth in wholesale trade. Fulton County, Georgia, and Mecklenburg and Guilford Counties, North Carolina, alone outrank Greenville in volume of retail trade.

As for wholesale trade, Greenville County is outranked only by Fulton and Chatham Counties, Georgia, and Mecklenburg and Guilford Counties, North Carolina.

Greenville's commanding position as a trading center is accounted for in part by the county's location with reference to the rich and prosperous industrial and agricultural region comprising the western tier of counties of South Carolina. Within one and one-half hours drive from the city of Greenville by motorcar are situated 72 incorporated towns and cities, all connected with Greenville by hard-surfaced roads. Population of this compact area was, according to the 1930 census, 581,447. Of this number 71 per cent were white.

Greenville is the most populous of South Carolina's 46 counties, having, according to the Census of 1940, a total of 136,580 inhabitants. While the City of Greenville ranks 3rd among the cities of the state, this population is due to the fact that there has been no increase in the size of Greenville's incorporated area in the past 72 years. According to the Census of 1940, the population of the City of Greenville proper is 34,734. The population of the city and the immediate suburbs was, according to the Census Bureau, 74,767.

Other aspects of the picture were not less appealing than the economic. Greenville enjoys a delightful year around climate, its elevation above sea level reaching from 1,000 to more than 3,300 feet. Average annual temperature of 59.1 degrees and average annual precipitation of 53.1 inches, with relative low humidity readings, makes for comfortable living at all seasons of the year.



Dr. Geo. M. Truluck
President-Elect—South Carolina Medical Association

For more than a century Greenville has been known as a religious and educational stronghold. Greenville Woman's College and Furman University, both established more than 100 years ago, have recently been merged and now rank as one of the outstanding church-related colleges of the South. Both are standard A-Grade institutions. The combined enrollment is approximately 1,000.

Greenville's public school system is outstanding. The city school system and the Parker School District, the latter comprising industrial areas adjacent to the city, have a combined enrollment in excess of 16,000. Equipment as well as standards of teaching in both public school systems is of the very highest.

More than 90 churches, representing practically all the better known denominations, are to be found in this city and immediate suburbs.

THE GREENVILLE MEETING OF 1878 THIS IS THE WAY THEY DID THINGS IN GREENVILLE BEFORE THE GAY NINETIES

The following is added to the "Minutes" of the twenty-eighth annual meeting of the South Carolina Medical Association which met in Greenville in 1878. The meeting was presided over by Dr. J. F. M. Geddings of Charleston. Evidently this account was written by Dr. Henry D. Fraser, Recording Secretary, also of Charleston.

THE ENTERTAINMENT

Given by the Greenville Medical Association, conceived in a spirit of hospitality and good feeling, and carried out with refined taste, proved a great success.

With judgment severely good, the time appointed for the banquet was the evening *subsequent* to the adjournment of the Association, when the more serious work which had brought them together being in the retrospect, no visions of knotty points to

be discussed on the ensuing day, nor of unfinished business, requiring early retirement and clear heads, "no thought for the morrow" could arise to mar the pleasure or curtail the enjoyment at the feast to which their friends of the "Mountain City" had invited their *confreres* of the Association.

The Committee of Arrangements, in preparing their programme, had wisely taken counsel of their fair friends, and reinforced by their judgment, had matured their plans with the feeling of strength which guaranteed perfection as the result; and although stern conventionality debarred them the pleasure of the company of the gentler sex at the festive board, still the members of the Association could not but feel happy in the presence of so many evidences of their thoughtfulness and tasteful consideration, manifested in every detail of the entertainment, from the ornamentation of the hall and table, and the garnishment of the dishes, to the charming little *bouquet de boutonniere* prepared by them for every guest.

The occasion proved to be all, and more than it promised; many choice spirits outside of the profession were present; the Executive Department, the Bench and Bar, the Press, the Military, the Legislature, the City and other Corporations, were represented and all contributed, in a genial way, to make the evening a most agreeable one.

The discussion of the delicacies with which the table groaned, being over, regular toasts were proposed and replied to, and then the usual cross-fire of jest and humor prevailed, until the small hours were waxing larger, when reason and moderation asserted their claim, and hosts and guests, with mutual felicitations on the success of the meeting of 1878, bade each other farewell, with pledges of renewed efforts in behalf of the Association.

In Greenville "the lines," had, as it were, "fallen unto us in pleasant places;" long may she be the exponent of progress, and the embodiment of hospitality, and may the spirit that animates her good people, and the success that attends their energy, spread themselves until new life, new hope, and genuine prosperity cover our entire State, renewed, revived, and happy as of yore.

H. D. F.

Lieut. Robert P. Jeanes of Easley has been called to active duty in the Medical Reserve Corps, as has Capt. O. B. Mayer of Columbia and Lieut. William S. Scott of Jonesville. Lieut. Chapman J. Milling of Columbia has had his orders revoked. Lieut. Charles M. Lide of Columbia has been called to

duty at the Naval Hospital at Parris Island.

Miss Florence Radcliffe Clauss of Charleston and Columbia and Dr. Charles Granger Chapman of Columbia were married on Saturday, March 1st, in the Second Presbyterian Church in Charleston.

MEDICAL PREPAREDNESS

From 47 to 97! Although that would not be up to normal if it were the temperature of a patient, it is better than good when it represents the percentage of return of the medical preparedness questionnaires in South Carolina. We are quite proud of the fact that, since the last report in this Journal (February issue), the standing has been raised 7 percent. At that time the Third District only had completed its quota of blanks. Now, we are happy to say, that the Fourth, Fifth and Seventh Districts have also finished this part of the work. In addition to the fifteen counties reported in February there are fifteen more in which schedules for all physicians have been filled in. These, with their county chairmen of medical preparedness are as follows:

Barnwell	Dr. Herbert Gross
Beaufort-Jasper	Dr. H. C. Foster
Berkeley	Dr. J. N. Walsh
Chester	Dr. W. R. Wallace
Edgefield-Saluda	Dr. A. R. Nicholson
Fairfield	Dr. J. C. Buchanan, Jr.
Georgetown	Dr. J. H. Porter
Greenville	Dr. J. W. Jerve, Jr.
Kershaw	Dr. G. S. Rhame
Marlboro	Dr. T. H. Smith
Spartanburg	Dr. H. W. Koopman
Sumter	Dr. W. E. Mills
York	Dr. W. F. Strait

Not quite half of the doctors in the state responded at once to the request of the A. M. A. to fill in the questionnaires. The rest have been coming in by degrees over a period of four

months. Many at first did not realize the importance of the blank until special attention was called to it. On the other hand, several sent them to Chicago and, when an inquiry from the state chairman reached them, obligingly filled in duplicates and returned these to the office at Seneca. This was not really necessary, but showed a fine spirit of cooperation. One physician was ill when a blank was thrust upon him, so to speak, but he dictated the answers to his wife as she sat by his bedside.

Upon being called over the telephone about his questionnaire, one doctor said he would come himself to the office and fill in the form. To the surprise of the stenographers, a Red Cross ambulance appeared before the door driven by a uniformed chauffeur. The doctor descended. No, he was not a casualty, but a CCC Camp physician, who was using the only mode of transportation available at the time.

Some 1385 questionnaires are in, but where are the missing 42? They are scattered around over four Districts. Quite a few belong to doctors who have recently come into the state, and others to interns in the hospitals of the larger cities. "The race is not won until the last mile is run." We are sure that, within the next few days, the goal will be reached and every single medical man and woman in South Carolina will be represented by a questionnaire filled in and filed at the A. M. A. headquarters in Chicago.

BOOK REVIEW

OFFICE UROLOGY. By P. S. Pelouze, M. D., Assistant Professor of Urology, University of Pennsylvania, Consulting Urologist, Delaware County Hospital, Special Consultant to United States Public Health Service; Member of Board of Directors, American Social Hygiene Association and American Neisserian Medical Society. 766 pages with 443 illustrations, 19 in color. Philadelphia and London. W. B. Saunders Company, 1940. Cloth, \$10.00.

The author presents an excellent text on office procedures in urology. His delightful style of writing and detailed description of office procedures bring to the urologist a text of inestimable value. The book is replete with excellent photographs and diagrams and shows many of the author's own technical activities. It contains a lengthy section on cystoscopy and roentgenography, also illustrated with numerous vivid pictures.

OBSTETRICS AND GYNECOLOGY

J. D. GUESS, M.D., GREENVILLE, S. C.

THE MEETING OF THE SOUTH ATLANTIC ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

The fourth annual meeting of this organization was held in Jacksonville on February seventh and eighth. The association was formed in Charlotte four years ago and it has a membership of almost one hundred specialists and near specialists from the states of Virginia, North and South Carolina, Georgia and Florida. "The purpose of the organization (as stated in its constitution) is to encourage the study, improve the practice and advance the cause of obstetrics and gynecology; to promote the development of the professional interests and to encourage friendship among such specialists in this area, and through invitation to its membership to grant recognition of special knowledge in obstetrics and gynecology to those who show themselves to be duly qualified."

There are ten members from South Carolina and they come from Charleston, Columbia, Greenville, Spartanburg, and Sumter. Although the requirements as to professional qualifications and specialization of practice are rather high, there are other men in the state who can meet these requirements, and they would find membership in the association interesting and helpful.

The annual meetings are open to all reputable physicians interested in obstetrics or gynecology, and each year several non-members attend and are cordially received.

The two guest speakers at the meeting in Jacksonville were Dr. John Rock of Boston and Dr. N. J. Eastman of Baltimore, and both made most interesting addresses, besides contributing to the discussion of other papers presented at the meeting.

Dr. Rock discussed and illustrated, with the most technically perfect lantern slides I have ever seen, the work he and his group are doing in the study of early embryos. The earliest embryo studied by him was eleven days old.

Two findings of clinical significance were briefly touched on by Dr. Rock. The first is that fifty per cent of the embryos so far studied had histological indications that definitely showed that abortion would have occurred. There were evident defects in either the implantation or the embryological development which were incompatible with continuance of the pregnancy. The second finding of clinical significance explains histologically the so called placental sign, or seeming menstruation after conception, and certain cases of more or less profuse uterine bleeding simulating abortion, but where abortion does not occur and where embryonal development continues undisturbed. These investigators have found, and Dr. Rock demonstrated in lantern slides of histological sections, that hemorrhage occurs in uterine glands removed from the site of implantation of the embryo. These glands communicate with the uterine cavity, and so this extravasated blood may find its way to the outside.

Dr. Eastman spoke on the advances made in the last decade in the understanding of the etiology and in the treatment of puerperal sepsis. He stated that prior to ten years ago it was almost universally held that practically all cases of puerperal sepsis were of exogenous origin. That is, that the bacterial agent was introduced into the genital tract by the hands or instruments of the doctor, or from his pharynx by droplet contamination. The streptococcus hemolyticus was thought to be the invader. On the other hand the most frequent cause of this disease has now been proven to be an anaerobic streptococcus, which more or less normally inhabits the vaginae of many women. These organisms are non-pathogenic under normal conditions, but become invasive and dangerous in tissues subjected to trauma. This endogenous source of infection applies to most cases of puerperal sepsis except those of hospital or ward epidemics, which are usually caused by the hemolytic streptococcus, and

which usually come from the nasopharynx of nurse or doctor. Dr. Eastman recalled that the newer chemotherapy is valueless in the treatment of those cases where the anaerobic streptococcus was the infecting agent.

Dr. T. J. Williams of Charlottesville reported on a series of 309 cases of postpartum sterilization operations, a larger series than any reported in the literature so far. His experience seems to indicate that the operation is safe and valuable.

Dr. J. D. Parker of Greenville reported a rare case of acute polyhydramnios and discussed its diagnosis and treatment.

Dr. R. L. Pearce of Durham reported a ten year survey of the experience at Duke University Hospital with total and subtotal hysterectomies and discussed but did not solve the old problem of the wisdom of performing either the one or the other more or less routinely. The discussion elicited by this report was warm and spirited, although, perhaps, at times based on faulty ideas of pathology and histology.

Dr. Hudnal Ware of Richmond, in his report on a series of cases of ectopic pregnancy, stated that the most nearly constant symptom elicited by him in this condition, which is characterized by the inconstancy of the clinical picture, was uterine cramps.

The meeting next year will be held in Atlanta, some time in February, and those who read the editorials in this department would find it a profitable meeting to attend.

OBSTETRICS IN GREENVILLE

J. Dechard Guess, M. D.

The Editor-in-Chief has planned this number of the Journal to be a special Greenville number. It is in conformity with this desire that this article is written. It was thought that, perhaps, the facilities offered by Greenville to expectant mothers who desire hospital care would be of general interest to the profession of the State.

There are two general hospitals in the city and each of these has an obstetrical department. In each institution a complete floor of one wing is devoted to obstetrics, and in each

institution the delivery rooms are separate and separated from the suite of operating rooms, and they are staffed by nurses whose duties are restricted to the department of obstetrics. Both hospitals are prepared to administer nitrous oxide and oxygen to their patients and each has a resident staff which delivers most of the charity cases.

In each hospital there is in charge of the obstetrical department, a nurse-supervisor who has had special training in obstetrical work, and an effort is made to employ as graduate assistants only nurses who have a special interest in obstetrics.

The General hospital is a city owned institution, controlled by a lay board of governors. It has increased in size and improved in the quality of its service and facilities in a most remarkable manner. However, these improvements are apparent to greater extent in other departments than in that of obstetrics. The hospital has 10 private obstetrical rooms, 14 white ward beds and 6 colored ward beds, a total of 30 obstetrical beds. In times of great urgency, several extra beds may be crowded into the wards. These beds are reserved for clean obstetrical cases and other types of cases are kept out of the department. Infected obstetrical cases are handled either on a medical floor or in the contagious ward.

In 1940, there were 550 white women and 173 colored women delivered in the hospital. There were 2 white and 1 colored maternal deaths, a rate of 4.3 per 1000 live births. These 723 deliveries yielded 699 live births and 34 stillbirths. There were 26 neonatal deaths, an infant mortality of 8 per cent. Although no effort will be made to analyze these infant losses, the great majority were the result of prematurity and toxemia in neglected toxemic or nephritic mothers who were admitted to the hospital as emergencies. Delivery was by Caesarean section 47 times, an incidence of about 6.5 per cent. There were 21,051 visits to the obstetrical outpatient clinics, and here the ratio of white to colored patients is about one to ten.

Only primagravida or complicated multigravidae are admitted from the clinic to the

wards for delivery. Most of the negroes, not so admitted, are delivered by midwives.

St. Francis hospital has 7 private rooms and 11 ward beds, and yet with this small capacity, there were 564 deliveries conducted there in 1940. Two mothers died, 21 infants were still-born, and there were 11 neonatal deaths. The maternal mortality was 3.6 per 1000 live births, and the infant loss was about 5.5 per cent. There were 14 Caesarean sections, an incidence of 2.5 per cent.

The staffs of the two hospitals are the same or nearly so, and yet the statistics quoted are quite dissimilar. There are probably several

explanations for this. St. Francis has no negro patients. Its ratio of charity patients, and hence neglected emergency patients, to private cases is much less than at the General. Finally there is a definite encouragement of conservatism, which amounts at times almost to compulsion, by the Sisters of St. Francis. This is directed especially toward the younger members of the staff, and undoubtedly has a life saving restraining influence. A final factor is the fact that the house officers at St. Francis are second year men, whereas at the General hospital first year internes deliver most of the service cases.

Conference of the Department of Pathology of the Medical College of the State of South Carolina

February 7, 1941

Case of Dr. J. A. Boone

ABSTRACT NO. 433 (72589)

Student P. S. Cromer presenting:

History: This 31 year old negress admitted 12-30-40 with the chief complaints of "shortness, pain in chest, cough and fever." Had had a chronic cough. On 12-24-40 she had a severe chill and became dyspneic with chest pain and cough. Temp. elevated and remained quite high with aggravation of all other symptoms. Orthopnea marked. Had no hemoptysis until 12-29-40.

Past History: Admitted to Pinehaven Tuberculosis Sanatorium on August 30, 1940 having "begun to feel bad" 6 days previously with rhinitis, feverish feeling and anorexia. At onset of illness she went to doctor who gave her cough medicine and referred her to public health case worker. She had been employed as maid in a white household and had been in good health, except for a "light cough," until taken ill 6 days before. No other definite information about cough except that she had had it for a "long time" and that it is sometimes productive of greyish material. No breathlessness admitted. No hemoptysis or night sweats.

History of anti-syphilitic therapy uncertain. Says she took a "shot" at Roper Hospital once, but none subsequently. Sputum consistently negative for tubercle bacilli at Pinehaven. Discharged Nov. 2, 1940 as improved. Patient known to have once worked in the Charleston Bag Factory. Physical: T-104, P-135, R-40 BP- Unobtainable. At Pinehaven 110/80.

Acutely ill, orthopneic and emaciated negress. Skin hot and sweaty with no rashes. Conjunctivae extremely pale. Pupils regular and react. Question-

able icterus. Nose congested and tongue coated. Pharynx congested. Generalized lymphadenopathy, but nodes not matted. Asthenic chest with expansion limited bilaterally. Respirations abdominal in type. Tactile fremitus slightly increased over right lower lobe with more pronounced increase over left lower lobe. Percussion note impaired over same areas. Breath sounds tubular. Rales of heavy asthmatoïd quality heard at base of left lung and quite diffusely over right lung. Mediastinum not widened. Pulse almost imperceptible, rapid and regular. No murmurs. Heart somewhat enlarged but difficult to define borders. Peripheral vessels not sclerosed. Neck veins greatly distended, but veins elsewhere are not unusual. Liver enlarged about 2 f. b. below costal margin; surface smooth. Abdomen soft and flat with no free fluid. No peripheral edema. At Pinehaven examination of the chest revealed poor expansion and slight impairment of resonance over lower half of right lung anteriorly, and in axilla. Fine and medium rales after coughing in the right 2nd and 3rd interspaces and also posteriorly.

Laboratory: 12-30-40.

Urinalysis

Sp. Gr. 1.019

Alb. plus

Pus 10/HPF

Blood Occ.

Casts 2 plus (F. G.)

Epith. 3 plus

Wassermann and Kline—Positive

Blood Culture 12-30 Neg.

Sputum 12-30 Type III Pneumococci

Neg. for tubercle bacilli.

Blood 12-30-40

WBC 60,000

Hb. 9 gms.

Polys. 89%

Course: Condition remained exceedingly grave and patient expired at 6:45 P. M. on 12-30-40.

Dr. Boone (Conducting): Mr. Fisher, will you give us your impression of this case?

Student Fisher: I think the symptoms of cough, pain in chest, chill and fever together with the laboratory and physical findings are compatible with a diagnosis of lobar pneumonia. Jaundice also occurs in about 10% of pneumonia cases, so its possible presence here is not against this diagnosis. Acute tuberculous pneumonia should also be considered, but the high blood count and failure to find tubercle bacilli in the sputum are against it.

Dr. Boone: Do you think lobar pneumonia was the only disease she had?

Student Fisher: She had some other disease when admitted to Pinehaven, but what it was is difficult to say. One thinks, of course, of tuberculosis, but the negative sputum and the portions of the lungs involved makes one tend to rule it out, as tuberculosis most often affects the upper parts of the lungs. Syphilis of the lungs is rare, but as it does occur it has to be considered here. I don't see how it can be definitely ruled out.

Dr. Boone: Is there any definite way to rule it in?

Student Fisher: The therapeutic test is the only way I know. If under proper anti-syphilitic therapy she showed great improvement, I think that the diagnosis of syphilis of the lung could be made with some degree of confidence. We have no information as to the adequacy of her treatment or as to the degree of her response.

Dr. Boone: Well, you have stated that tuberculosis is pretty well ruled out and that syphilis is very rare, now what other things would you consider?

Student Fisher: Carcinoma of the lung is a possibility, but I cannot definitely make the diagnosis.

Dr. Boone: You seem to think that the pneumonia was definitely superimposed on some other chronic lung condition. If you had to bet on such a condition which one would you choose?

Student Fisher: I think I'd choose carcinoma of the lung.

Dr. Boone: Mr. Hamer, do you agree?

Student Hamer: I agree with Mr. Fisher as regards the pneumonia, but what it was superimposed upon is very difficult to say. I believe that a pelvic examination would have been of importance in ruling out metastatic carcinoma to the lungs, but as it now stands I think tuberculous pneumonia is the best bet.

Dr. Boone: What possible effect would working in a bag factory have?

Student Hamer: I have heard that a very dusty atmosphere exists in such plants and she may have had one of the pneumoconioses, such as silicosis. There is no history of exposure to asbestos dust, so this seems pretty well eliminated. I still think the best bet is a chronic tuberculous process with a superimposed acute tuberculous pneumonia.

Dr. Boone: Mr. Jameson, in a moment Dr. Kelley is going to name a dozen conditions causing chronic pulmonary disease such as this patient may have had; can't you anticipate him and make our list more complete?

Student Jameson: Some type of fungus disease of the lung should be mentioned. Blastomycosis is the most common infection of this nature that involves the lungs. Actinomycosis is also capable of doing the same thing. Such conditions would be eliminated or proved by examination of the sputum for the characteristic organisms of each. This patient undoubtedly had chronic bronchitis, but this might be due to the disease which is also causing the fibrosis and not have anything to do primarily with the pulmonary pathology that has resulted.

Dr. Boone: Do you think this patient had any evidence of heart disease?

Student Jameson: Yes, there are several symptoms and signs suggesting this. There was enlargement of the liver and heart and distended neck veins, all of which together point to some cardiac deficiency.

Dr. Boone: How do you explain this?

Student Jameson: I think it points to some chronic fibrotic disease of the lung that has so impaired the pulmonary circulation as to cause hypertrophy of the right side of the heart with subsequent dilatation and failure. Long standing asthma and bronchitis may cause such a sequence of events.

Dr. Lynch: I can give you some more data about the bag factory if that will help. This plant used a tough kind of grass from Africa called sisal. This material was torn up and shredded to make fiber from which the bags were woven. Of course the breaking up of this grass was conducive to quite a dusty atmosphere.

Student Jameson: I still don't see how this could cause lung disease unless the grass or dust contained silicon dioxide or asbestos.

Dr. Boone (showing X-ray films): Mr. Jameson will you interpret these for us?

Student Jameson: There is some infiltrate and increased density of the markings in the lower lobes bilaterally. I think that we can rule out tuberculosis and carcinoma from these films, or at least make the odds much less.

Dr. Boone: There is still one chronic lung disease that might be caused from burlap that no one has mentioned.

Dr. Kredel: Do you think the clinical story and X-ray findings are inconsistent with bronchiectasis?

Dr. Boone: Thank you very much. That is the disease that I've been trying to get all these people to at least mention. It seems to me that bronchiectasis is a very logical condition to be considered here.

Dr. Kelley: I saw this case on the ward and at postmortem examination. She obviously had an acute infection superimposed on some chronic lung disease, the nature of which was not at all clear.



*Dr. A. Benson Cannon
New York City
Associate Professor of Dermatology,
Columbia University*



*Dr. O. L. Miller
President of the American Academy
of Orthopedic Surgeons
Charlotte, North Carolina*

We were very much interested in the enlargement of the right heart and the fact that the pulmonary disease apparently involved only the lower portions of the lungs.

Dr. Pratt-Thomas: (demonstrating heart and lungs): This woman died of lobar pneumonia. As you see the right upper lobe is completely consolidated and liver-like and the visceral pleura is streaked with fibrinous exudate. There were several hundred cc. of cloudy fluid in the right pleural space. The interesting feature about this case, however, is the pulmonary fibrosis and dense scarring. As you see the lungs are distorted, the surface of the lower portions of the upper lobes and the upper portions of the lower lobes being puckered by contracted bands of fibrous tissue which extend into the lung substance. There are large emphysematous blebs projecting from the periphery in the region of these scarred areas. On sectioning these portions of the lung cut with increased resistance and were leathery and tough. In one lung the scarring is stellate and consists of dense gray tissue traversed by glistening grayish-white bands; in the other lung the scar has a more wedge-shaped configuration. The remainder of the lower lobes shows some diffuse fibrosis and the dilatation of the air spaces can be clearly seen grossly. The bronchi appear somewhat dilated with an increase in the peri-bronchial fibrous tissue.

The heart weighed 300 gms. You can plainly see the disproportion in the size of the ventricles. The right side of the heart is dilated and the ventricular wall measures 6 mm. in thickness as compared with 10 mm. for the left. The trabeculae carneae are quite massive on the right, but thin and delicate on the left.

Dr. Boone: The correlation between the amount of fibrosis in the lung and its effect on the right heart is interesting. The long standing chronic pulmonary disease must have caused some increased resistance in the pulmonary circulation. When the acute congestion associated with the pneumonic process was superimposed it caused enough elevation of the venous pressure to lead to right heart failure.

Dr. Lynch: We have never had a case of pneumoconiosis come from the bag factory. Dr. Smith and I made an investigation of this plant some years ago and found a very dusty atmosphere, but have never seen a case of silicosis develop there, although it would be in the realm of possibility.

This patient should have had her occupational history more thoroughly investigated, however, and all details should have been known. At any rate no evidence of dust or silica remains in her lungs. We do find a few dust cells, but would probably find more dust in any of our lungs. The fibrosis is a completed process that hasn't left a clue as to its etiology. It is completely healed. It is indeed interesting that there is as much right heart hyper-

trophy as there is with involvement of only the lower portions of the lungs. She didn't have a sufficient amount of reserve lung tissue and when she contracted the pneumonia she was unable to carry the additional load.

It is possible for the fibrosis to be the residue of a syphilitic process, particularly the dense stellate scars which seem to indicate that some destructive, tissue-destroying process had taken place. An organized pneumonia is the other best possibility. She could have had an old organized lobar pneumonia. The puckered scars certainly point to some destructive local lesions such as gummata. There is no remnant of tuberculosis in the lungs or lymph nodes. There is some dilatation of the bronchi and peri-bronchial fibrosis, but I do not think this represents a primary bronchiectasis.

Dr. Boone: I saw a deforming fibrotic process very similar to this once which was thought to be characteristic of a syphilitic process.

Student: Could this be classified as a chronic interstitial pneumonia?

Dr. Lynch: No. This process is not continuing, but is healed. There is no evidence of inflammation.

Student: Could coal dust or some other form of dust have caused this process?

Dr. Lynch: There is an accumulation of evidence that only silicon dioxide or the silicate contained in asbestos can produce fibrosis of the lung. It is even thought now that the fibrosis in anthracosis is due to the silica contained in the coal dust.

Dr. Kelley: I think this case offers very eloquent evidence of the fact that you need involvement of only half of the lung tissue to produce hypertrophy of the right heart.

LANCASTER COUNTY MEDICAL SOCIETY

The regular meeting of the Society was held at the home of Dr. W. G. Crawley, Feb. 13, 1941. The out of town visitors were Dr. William Weston, Jr.; Dr. James Quattlebaum, and Dr. F. P. Coleman, all from Columbia. After a delightful supper with Dr. and Mrs. Crawley, the three visitors gave very instructive lectures.

1. Discussion of Vitamins—Dr. William Weston, Jr.

2. Cardiology — Dr. James Quattlebaum.

3. Chest Surgery—Dr. F. P. Coleman.

The business session included reading and adoption of the minutes of the last meeting and election of the following officers:

President—Dr. W. C. Carnes.

Vice-President—Dr. W. G. Crawley.

Sect.-Treas.—Dr. J. C. Harris.

Delegate to the State Convention—Dr. W. G. Crawley.

Alternate—Dr. W. C. Carnes.

After adjournment, the visitors were taken for inspection of the Marion Sims Memorial Hospital.

J. C. HARRIS, M. D.,

Sect.-Treas.

PSYCHIATRIC INSTITUTE

Announcement has been made by Dr. C. F. Williams, Superintendent of the South Carolina State Hospital, that the Third Institute of Post Graduate Psychiatric Education for State Hospitals will be held at the South Carolina State Hospital in Columbia April 14 to 26. An excellent course of instruction is being

offered and physicians who are interested in psychiatric subjects should derive considerable benefit from attending the lectures.

Any of the physicians of the State who are interested are cordially invited to attend this Institute. There will be no fees charged. The facilities of the hospital will be at the disposal of the instructors, and some most interesting clinics will be arranged.

TEACHING SCHEDULE FOR THE THIRD INSTITUTE ON POST-GRADUATE PSYCHIATRIC EDUCATION FOR STATE HOSPITALS

SOUTH CAROLINA STATE HOSPITAL
COLUMBIA, SOUTH CAROLINA
APRIL 14 TO APRIL 26

FIRST WEEK

TIME	14 Monday	15 Tuesday	16 Wednesday	17 Thursday	18 Friday	18 Saturday
9:00 to 10:00	Psychobiology, personality studies, special techniques. Dr. Rymer				Neurophysiology physiology	Pavlovian Dr. Lyman
10:15 to 12:00	Method of examination, psychopathology, case demonstration, clinical psychiatry. Dr. Whitehorn				Physiological integration Dr. Lyman	
12:00 to 1:15	General discussion					
1:15 to 2:15	Neuroanatomy, neuropathology Dr. Barrera				Rorschach	Dr. Rymer
2:15 to 3:15	Modern concepts of treatment of syphilis. Dr. Rymer	Neuro-surgery. Dr. Woodhall	Relationship of Crime to mental illness and defect. Dr. Wilson			Clinical psychiatry (cont'd.) Dr. Whitehorn
3:15 to 4:15	Neuro-ophthalmology. Dr. Anderson	Neuro-roentgenology Dr. Reeves	Child Psychiatry Dr. Beckman		Contributions of experimental psychology to psychiatry. Dr. Lyman	
4:15 to 5:15	Psychosomatic Medicine. Dr. Keller				Relation of sociology to psychiatry Dr. Lyman	

SECOND WEEK

TIME	21 Monday	22 Tuesday	23 Wednesday	24 Thursday	25 Friday	26 Saturday
9:00 to 10:00	Demonstrations: electric shock and metrazol controlled by curare-amylal interview. Dr. Rymer		Problems of hospital management and administration. Relation of medical school and community to hospital. Education possibilities. Dr. Williams			
10:15 to 12:00	Psychotherapy, case demonstration, clinical psychiatry.				Dr. Whitehorn	
12:00 to 1:15	General discussion.					
1:15 to 2:15	Neuropathology Dr. Barrera				Clinical neurology Dr. Crispell	
2:15 to 3:15	Clinical neurology					
3:15 to 4:15	Psychoanalytic Psychiatry—Dr. Kaufman			Forensic Psychiatry—Dr. Keys		
4:15 to 5:15	Electro-en- cephalography. Dr. Loewenbach		Military psychiatry Dr. Overholser		Psychotherapy in the psychoneuroses. Dr. Whitehorn	

EVENING

7:00	Dinner Meeting. "Reflections." Dr. Meyer		
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OFFICERS, DELEGATES AND ALTERNATES OF COUNTY MEDICAL SOCIETIES
SOUTH CAROLINA MEDICAL ASSOCIATION

(As far as obtainable to March 20, 1941)

County	President	Vice-Pres.	Secy.-Treas.	Delegate	Alternate
ANDERSON	Dr. Ned Camp Anderson	Dr. C. C. Horton Pendleton	Dr. S. H. Haddock Anderson	Dr. E. O. Hentz Dr. Wade Thompson Dr. Frank Wrenn	Dr. J. R. Young Dr. Olga Pruitt Dr. L. R. Kirkpatrick
CHARLESTON	Dr. J. H. Cannon	Dr. T. E. Bowers	Dr. J. I. Waring	Dr. Robt Wilson, Jr. Dr. J. J. Ravenel Dr. A. J. Buist, Jr. Dr. R. M. Hope Dr. J. I. Waring Dr. James O'Hear	Dr. H. C. Robertson, Jr. Dr. F. E. Kredel Dr. G. P. Richards Dr. A. E. Baker Dr. R. B. Taft Dr. F. A. Hoshall
Medical Society of S. C.		(all officers, delegates and alternates are of Charleston)			
CHEROKEE	Dr. J. C. Hall Gaffney	Dr. J. H. Sanders Gaffney	Dr. J. P. Thomas Gaffney		
CHESTERFIELD	Dr. J. P. Harrison Cheraw	Dr. D. C. Griggs Pageland	Dr. W. L. Perry Chesterfield	Dr. D. C. Griggs	
CHESTER	Dr. V. P. Patterson Chester	Dr. J. B. Floyd Great Falls	Dr. J. N. Gaston, Jr. Chester	Dr. W. R. Wallace	Dr. J. N. Gaston, Jr.
COLLETON	Dr. L. M. Stokes Walterboro	Dr. R. Ackerman Walterboro	Dr. J. W. Chapman Walterboro	Dr. R. Ackerman, Jr.	Dr. W. M. Bennett
DORCHESTER	Dr. A. S. Behling St. George	Dr. E. D. Tupper Summerville	Dr. J. B. Johnston St. George	Dr. J. B. Johnston	Dr. L. F. Behling
EDISTO SOCIETY (Bamberg, Calhoun & Orangeburg Counties)	Dr. A. W. Lowman Denmark	Dr. J. W. Harter Orangeburg	Dr. W. O. Whetsell Orangeburg	Dr. J. H. Danner Dr. O. Z. Culler Dr. T. M. Stuckey Dr. A. P. Traywick	Dr. A. L. Black Dr. H. M. Eargle Dr. H. J. Stuckey Dr. H. C. Raysor
FLORENCE	Dr. Howard Stokes Florence	Dr. W. E. Hicks Timmons ville	Dr. Henry Herbert Florence	Dr. W. H. Poston	Dr. Howard Stokes
GEORGETOWN	Dr. J. H. Porter Andrews	Dr. F. A. Bell Georgetown	Dr. J. T. Assey, Jr. Georgetown	Dr. P. E. Assey	Dr. J. R. Siau
GREENWOOD	Dr. H. B. Morgan Ware Shoals	Dr. J. M. Symmes Greenwood	Dr. Wm. C. Alston, Jr. Greenwood		
GREENVILLE	Dr. C. C. Ariail (all of Greenville)	Dr. J. W. White	Dr. Keitt Smith (Secy.) Dr. T. M. Northrop (Treas.)	Dr. H. M. Allison Dr. Perry Bates Dr. Thomas Brockman Dr. J. D. Guess Dr. George Wilkinson Dr. J. A. Sasser	
HORRY	Dr. J. A. Sasser Conway		Dr. W. A. Rourk Myrtle Beach		Dr. H. B. Holmes
KERSHAW	Dr. C. A. West	Dr. J. W. Brunson (all of Camden)	Dr. F. G. Shaw	Dr. G. S. Rhame	Dr. J. W. Brunson
LAURENS	Dr. W. T. Pace Gray Court	Dr. B. O. Rhame Clinton	Dr. J. L. Fennel Waterloo	Dr. F. K. Shealy	Dr. J. G. Hart
LEXINGTON	Dr. J. B. Edwards Swansea	Dr. J. S. Liverman Lexington	Dr. J. H. Mathias Lexington	Dr. D. S. Keisler	
LEE	Dr. F. A. Blanchard Bishopville	Dr. J. H. Matthews Elliott	Dr. L. A. Nimmons Bishopville	Dr. L. A. Nimmons	
LANCASTER	Dr. W. C. Carnes	Dr. W. G. Crawley (all of Lancaster)	Dr. J. C. Harris	Dr. W. G. Crawley	Dr. W. C. Carnes
MARION	Dr. H. S. Gilmore Nichols	-----	Dr. J. P. Cain Mullins	Dr. J. P. Cain	
MARLBORO	Dr. Douglas Jennings	Dr. C. R. May (all of Bennettsville)	Dr. T. H. Smith	Dr. W. C. Hunsucker	Dr. Wm. Evans
NEWBERRY	Dr. W. L. Norville Whitmire	Dr. H. B. Senn Newberry	Dr. J. C. Sease Newberry	Dr. T. H. Pope	Dr. A. T. Nealy
OCONEE	Dr. J. E. Orr Seneca	Dr. W. A. Strickland Westminster	Dr. R. F. Zeigler, Jr. Seneca	Dr. J. E. Orr	
PICKENS	Dr. J. L. Valley Pickens	Dr. N. C. Brackett Pickens	Dr. L. W. Luttrell Pickens	Dr. C. M. Tripp	Dr. L. W. Luttrell
RICHLAND	Dr. Wm. Weston, Jr.	Dr. S. W. Talbert	Dr. R. B. McNulty Secy.	Dr. H. H. Plowden Dr. N. B. Heyward	Dr. C. T. Bullock Dr. A. F. Burnside
(Columbia Medical Society)		(all officers and delegates of Columbia)		Dr. W. A. Hart Treas. Dr. R. B. Durham Dr. D. F. Adecock Dr. J. M. Davis Dr. J. T. Quattlebaum Dr. J. B. Watson	Dr. G. T. McCutcheon Dr. C. K. Lindler Dr. E. W. Barron Dr. Coyt Ham Dr. L. F. Hall

RIDGE MEDICAL SOCIETY (Edgefield & Saluda Counties)	Dr. W. T. Gibson Batesburg	Dr. P. A. Brunson Ridge Spring	Dr. T. K. Fairey Johnston	Dr. T. K. Fairey Dr. O. P. Wise	Dr. A. R. Nicholson Dr. P. A. Brunson
SPARTANBURG	Dr. J. M. Fleming	Dr. Leon Poole (all of Spartanburg)	Dr. G. D. Johnson	Dr. Dennis Hill Dr. S. J. Morrow Dr. John Fleming	
SUMTER	Dr. R. B. Bultman Sumter	Dr. W. J. Snyder Sumter	Dr. J. R. Dunn Sumter	Dr. P. E. Huth Dr. C. J. Lemmon	Dr. C. R. F. Baker Dr. N. O. Eaddy
UNION	Dr. A. C. Hope	Dr. Theo Maddux (all of Union)	Dr. A. H. Stevens	Dr. H. P. Hope	Dr. F. P. Owings
YORK	Dr. J. B. Elliott Fort Mill	Dr. Ben Miller Rock Hill	Dr. M. G. Quantz Rock Hill	Dr. J. E. Massey Dr. W. E. Simpson Dr. W. W. Fennell	Dr. L. S. Hay Dr. W. E. Strait Dr. E. E. Strong

NEWS ITEMS

The National Foundation for Infantile Paralysis has announced a series of lectures to be held at Vanderbilt University, Nashville, Tenn. April 7th through 16th.

The lectures will be of the highest order—experts on the subject of poliomyelitis. Members of the South Carolina Medical Association are invited to attend.

The lecturers will be Dr. Paul F. Clark, University of Wisconsin; Dr. Charles Armstrong, U. S. Public Health Service; Dr. Thomas M. Rivers, Rockefeller Institute; Dr. Ernest W. Goodpasture, Vanderbilt University; Dr. John R. Paul, Yale University; and Dr. Frank Ober, Harvard University.

Lectures are held at 8 o'clock each evening of the days indicated.

Dr. Chapman J. Milling, member of the medical staff of the South Carolina State Hospital and author of "Red Carolinians" spoke at the annual banquet of the Greenville branch of the American Association of University Women on the evening of February 21 at the Poinsett Hotel. Dr. Milling's prose writings on early American history, American folklore and the Indian tribes of the Southeastern United States has attracted favorable comment. At this meeting he discussed his recent contribution, "Red Carolinians" which is a story of native tribes in South Carolina.

Dr. Frank Philip Coleman and Dr. Gordon S. Seastrunk both of Columbia lectured on "Individual Ligation in Pneumonectomy and Extramediastinal and Individual Ligation in Lobectomy—An analysis of the Authors Series" at the meeting of the South-

eastern Surgical Congress held in Richmond, Virginia, March 10, 11, and 12.

Dr. R. C. Brown, 62, Lancaster's oldest and most prominent physician died suddenly on the afternoon of February 24 in his office from a heart attack. He was engaged in the practice of medicine in Lancaster from 1901 until his death with the exception of a short time in Kershaw and several months at Camp Jackson and other places during the World War. Dr. Brown was a captain in the Medical Corps and was later made a Major which status he maintained. He served as President of the Lancaster County Medical Society during 1940 and shortly before his death was made chairman of the medical staff of the Marion Sims Memorial Hospital. He was active in religious and civic affairs of the community, being a deacon in the Presbyterian church and a member of the American Legion and the Masonic Order. Funeral services were held at the residence.

Dr. S. H. Ross of Seneca, was called into active duty for a year's service in the United States Army on March 10 and is stationed at Fort McClellanville, Alabama. Latest news from the doctor is to the effect that "Uncle Sam" is keeping him busy seeing that new recruits and old timers can see, hear and swallow well to the queen's taste.

Dr. Keitt H. Smith, the efficient Secretary of the Greenville County Medical Society and Chairman of the Committee on Commercial Exhibits for the State Medical Association Convention, has been called into active duty with the United States Navy. He left March 14 to begin his year of service.

BOOK REVIEW

METHODS FOR DIAGNOSTIC BACTERIOLOGY—A Complete Guide for the Isolation and Identification of Pathogenic Bacteria for Medical Bacteriology Laboratories. By Isabelle G. Schaub, A. B., Assistant in Bacteriology, Department of Pathology and Bacteriology, The Johns Hopkins University School of Medicine, and M. Kathleen Foley, A. B., Bacteriologist in Charge of the Diagnostic Bacteriological Laboratory of the Medical Clinic, The Johns Hopkins Hospital, Baltimore. St. Louis, The C. V. Mosby Company, 1940. Price \$3.00.

This book can be safely recommended as an excellent guide for both technician and the physician with his own small laboratory. The procedures are outlined clearly and simply and in many cases alternate methods are offered to please the preference of the reader. The book is arranged with a blank page facing each page of text, so that notes and additions may be made from time to time, in order to modify or bring material up to a later date. The methods are those used in the Johns Hopkins University School of Medicine and have shown themselves to be practical, as well as reliable.

WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

The 16th convention of the Woman's Auxiliary to the South Carolina Medical Association will be held in Greenville, April 15th-17th. The program appeared in the March issue of the Journal. A summary of the program is as follows:

Preliminary Meetings

Tuesday, April 15, 1941

6:30 Executive Board Buffet Supper—Mrs. R. M. Pollitzer, 32 Hillcrest Drive.

Private Dining Room, Poinsett Hotel

8:00 Student Loan Fund—Mrs. L. O. Mauldin, Greenville, Mrs. T. A. Pitts, Columbia.

8:45 Executive Board Meeting—Mrs. H. L. Timmons, Columbia, presiding.

PROGRAM

House of Delegates—9:30 A. M.

Wednesday, April 16, 1941

Reports of Councilors.

Reports of Committee Chairmen

Reports of County Presidents

Election of Officers.

Minutes, House of Delegates.

PROGRAM MEETING 11:30 A. M.

Club Dining Room, Poinsett Hotel

Mrs. H. L. Timmons, President, presiding

Luncheon—1:30 P. M.

Greenville Country Club

3:00—5:00 Garden Tour.

5:00—6:00 Tea at home of Mrs. Willard C. Hearin, E. Hillcrest Drive. (Informal).

Thursday, April 17, 10:30 A. M.

Fashion Show at Cabaniss-Gardner's, N. Main St.
Arrangements for golf may be made at the Information Desk.

Only a few more weeks and the members of the Woman's Auxiliary to the American Medical Association will be arriving in Cleveland for their Annual Convention, June 2-6. Have you made your reservations? If not, send your request, *at once*, to Dr. Edward F. Kieger, Chairman of Committee on Hotels and Housing, 1604 Terminal Tower Building, Cleveland.

Mrs. L. H. McCalla, general chairman of the convention which members of the Auxiliary to the South Carolina Medical Association will hold in Greenville on April 15, 16 and 17, recently called a meeting of those who will assist her as committee heads and laid final plans for the meeting which is expected to bring to the city many visitors.

Mrs. McCalla is assisted by Mrs. I. H. Grimball as co-chairman and by Mrs. L. O. Mauldin, secretary and treasurer; Mrs. J. Warren White, Chairman of registration and credentials; Mrs. W. H. Lyday, information and hospitality; Mrs. J. L. Sanders, chairman of publicity; Mrs. T. R. W. Wilson, headquarters and hotels; Mrs. L. O. Mauldin, pages; Mrs. J. G. Murray, luncheon; Mrs. Willard Hearin, tea and gardens; Mrs. W. H. Powe, music for business session; Mrs. C. P. Corn, special guests; Mrs. Everette Poole, transportation; Miss Miriam Sanders,

special music for tea; and Mrs. Wilson, decorations for hotel.

Further plans and additional committees will be announced later.

At the committee meeting held here recently with Mrs. McCalla, a late afternoon tea enjoyed during which the hostess served tea with dainty cakes and sandwiches from a beautifully appointed table. Tea was poured by Mrs. H. E. Hearn.

Spartanburg—February—The Woman's Auxiliary to the Spartanburg County Medical Society met at the home of Mrs. R. G. Anderson, Connecticut Avenue, Tuesday afternoon with Mrs. John M. Fleming as assistant hostess. Mrs. W. G. Morehouse, vice-president, presided. A long business meeting was held, due to the fact that plans were discussed regarding the Annual Doctor's party on March 30. This is the day set aside as Doctor's Day.

Mrs. Ben Allen gave an interesting discussion of the Official Bulletin of the Woman's Auxiliary to the American Medical Association.

Mrs. William H. Folk gave a talk on "Famine Fighters," a discussion of the necessary vitamins and chemicals essential to human nutrition.

Visitors were Mrs. John Robinson, Spartanburg, and Mrs. Gene Couceman, Rochester, N. Y., guest of Mrs. J. L. Jefferies.

At the February meeting of the Laurens County Medical Auxiliary at the home of Mrs. C. P. Vincent with Mrs. W. H. Dial as co-hostess, plans were discussed to give a banquet for the doctors of the county and also to aid the local "Bundles for Britian" by collecting medical instruments. A tentative date for the banquet was set for March 30, Doctors' Day, the affair to take the place of the regular auxiliary meeting, March 24. Mrs. John Garrett Hart was appointed chairman to collect the medical instruments. After the business session, presided over by the president, Mrs. D. O. Rhame of Clinton, Miss Sarah Eliza Swygert gave a delightful review of the "Notebook of Mark Twain" with special emphasis on the humorist's tributes to the medical profession.

MRS. P. E. SWORDS HOSTESS TO PICKENS COUNTY AUXILIARY

The Pickens County Medical Auxiliary held their January meeting in Liberty with Mrs. P. E. Swords as hostess.

The meeting was called to order by the President, Mrs. Swords, and the devotional was led by Mrs. J. W. Kitchin, followed by the Lord's Prayer being repeated in unison.

Nine members responded to roll call and business was transacted. Prizes were awarded to two High

For the Local Treatment of Acute Anterior **URETHRITIS**

(DUE TO NEISSERIA GONORRHEA)

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1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph. Gon. & Ven. Dis.*, 23, 201 (March) 1939.

*Silver Picrate, is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and saluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

School students for the best essay in Pickens County on "The Prevention of Tuberculosis." Miss Claudia Owens of Liberty won the first prize of \$2.50 and Miss Betty Tripp ofasley, the second prize of \$1.00. These essays were first judged by the Pickens County Health Dept. and the final judge was Miss Ruth Englehorn of New York and Anderson, Tuberculosis Field Worker for Pickens County.

Mrs. L. R. Poole, the program director for the meeting introduced Mrs. J. W. Potts, who read the high lights from Mrs. C. P. Corn's address to the South Carolina Medical Convention in Charleston, May, 1940. Mrs. N. C. Brackett gave an interesting account of Rheumatic Fever.

Mrs. R. E. Stewart was a visitor. The hostess served a tempting salad course to those present.

FEBRUARY MEETING OF THE RIDGE MEDICAL AUXILIARY

Dr. and Mrs. F. G. Asbell entertained the Ridge Medical Association and the Medical Auxiliary in their beautiful country home. Their guests numbered fifteen doctors and twelve ladies. They served an elaborate oyster supper with all the accessories.

In the absence of the Auxiliary president, Mrs. W. P. Timmerman, the vice-president, Mrs. O. P. Wise presided. After the devotional, a business program was carried out. The following officers were elected: President, Mrs. W. P. Timmerman; Vice President, Mrs. O. P. Wise; Secretary, Mrs. E. C. Ridgell; Treasurer, Mrs. F. G. Asbell. Mrs. Wise was elected delegate to the state meeting in Greenville.

The Auxiliary will observe Doctors' Day March 30.

Dr. Louise Ballinger gave a talk on "Mastoids;" Mrs. E. C. Ridgell read a paper on "Trench Mouth."

A rising vote of thanks was given Mrs. Asbell for her gracious hospitality.

After the meeting, Mrs. Ridgell read an original story—"For Better or Worse."

Mrs. Thomas Furman was named president-elect of the Auxiliary to the Greenville County Medical

Society at its meeting March 14, at the home of Mrs. Keitt Smith, at which time Mrs. M. Nachman became president and other officers were elected.

They include Mrs. J. H. Crooks, first vice-president; Mrs. E. O. Horger, Jr., second vice-president; Mrs. J. N. Holtzclaw, recording secretary; Mrs. Perry Bates, treasurer; Mrs. Everette B. Poole, historian; Mrs. J. W. McLean, publicity chairman; and Mrs. Herbert Bailey, student loan treasurer.

Annual reports of officers were heard and Mrs. L. H. McCalla spoke of plans for the state convention which will be held here in April.

Mrs. Nachman and Mrs. Poole were named delegates to that convention and Mrs. Furman and Mrs. Judson Graves are the alternates.

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JAMES W. VERNON, M.D., Supt. and Resident Physician.

THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

May, 1941

NUMBER 5

Address to House of Delegates

FRANK H. LAHEY, M. D.

BOSTON, MASSACHUSETTS

President-Elect, American Medical Association

In these times particularly when plans and practices which have been established for years and up to the present, satisfactory, are being criticized, among which is included medicine, an attitude of complacency and satisfaction is not permissible. Neither is it permissible in such times as these for a profession with a past as honorable and worthy as is that of medicine to attempt to discuss these criticisms in terms of whether or not such criticisms should exist. Criticisms must always and will always exist. It is my opinion that they are not best met by being irritated by their existence, by statements which can be misinterpreted as boastful as to what medicine has accomplished, by statements comparing medicine in this country with medicine in other countries, but rather by perhaps more basic explanations of why doctors are so jealous of medicine's reputation and the motive which prompts them to try to retain the methods of practice with which they and the world in general have been so successful, and which have proven so satisfactory over so many years.

Criticisms of medicine today, either by those within medicine or by those outside of medicine, tend to at least suggest that medicine is reluctant to accept new and novel plans because it is fearful that it will lose something in the way of financial returns, something in the way of prideful prestige, or something in the way of dictatorial control.

It is extremely important to impress upon every lay audience that those of us who are

anxious that changes in medicine be conservative and not radical are prompted to this position by no such purposes as are spoken of above. It is important to convey to the laity that everyone in organized medicine wishes to be certain that nothing is hastily done which will in any way change the quality of medicine, that any fears expressed concerning some of the newer proposals in medicine are not related to any selfish interest, to losing control of medicine, to obtaining less income, but rather related to fears lest these plans lower the standards and quality of medicine.

Organized medicine feels that experiments can be tried in government and in business with less danger than in medicine. If they prove wrong in these fields, the damage is really not serious, resulting only in inconvenience and in loss of money, both reparable. Organized medicine fears experiments in medicine of a radical nature lest they result in more serious, more irreparable damage. Should undesirable effects from radical changes occur, they may well be recognized so late that by that time damages which cannot be repaired have already resulted. Organized medicine is anxious that the changes in medicine continue to be of an evolutionary character, carefully thought out, slowly and patiently accomplished as has been the case in past years so that small disadvantages can be recognized early and met before larger ones appear. A fact which I have tried to convey to every lay audience to which I have talked throughout the United States is

an important one for every doctor to consider his duty to present to the lay public, and that is that competition in medicine, as has been stated by the American Medical Association, is never price competition. It is always solely quality competition. The desire of organized medicine and every right thinking doctor in the United States is to retain this outstanding quality feature of medicine. If organized medicine disagrees at times with what seems to them occasionally radical changes in medicine it is because the principle that the competition in medicine is always for quality and never for price has been the one which has brought medicine in the United States where it is today, a position which no one can deny is at a level higher than that of medicine anywhere else in the world.

It has at times been stated that organized medicine opposes plans whereby individuals can lighten the burden of medical care by a type of medical insurance. Everyone is familiar with the difficulties which a great many people with moderate incomes have in meeting medical expenses. Everyone is certainly favorable to any insurance plan which will lessen this burden. Organized medicine and the majority of doctors in no way object to this plan. They ask only that it contain those features which will if anything make the plan more desirable for the insured, and also retain principles which are basic in a free country. The outstand-

ing one is a free choice of doctors. The majority of doctors fear limitation of the free choice of doctors because they fear the placing of the decision as to who is a good doctor in the hands of any bureaucratic agency. This takes us on indefinitely to who is to decide who is a good doctor, which could be carried on ad infinitum. To a free choice of doctors a majority of physicians would add that any insurance scheme should be under the supervision of the State Commissioner of Insurance in order that it may conform to the sound financial needs of any insuring company, and in addition there should be some reasonable upper limit of income for those to whom the plan is available.

If these conditions which seem sound and reasonable, are met, as they are by the recent enabling act submitted to the Massachusetts State Legislature and supported by the Massachusetts Medical Society, there would be no criticism of any insuring group.

None of the above statements is meant to be contentious. Everyone in medicine it seems to me should retain tolerant consideration to opposing views with which they may not concur. If there ever has been a time in history when discord is undesirable and united effort urgently needed, almost everyone would agree it is the present, and it promises to be even more increasingly necessary in the immediate future.

President's Address

W. L. PRESSLY, M. D., DUE WEST, S. C.

As we come to this annual occasion I want to express to each of you my most sincere thanks and appreciation for the privilege of serving you as President of The South Carolina Medical Association. To me it has been a crowning honor. Any achievements which have been realized or policies which have been formulated are due to the fine spirit of co-operation within the medical fraternity. We are proud of our association, and I can truthfully say that I believe this organization is

accomplishing a great deal in behalf of medical education.

Permit me to say that the past two years have been very happy and busy years for me. It has meant much in my life and I trust I have been able to accomplish something for our association. I wish it were possible for every member of this association to serve as its President. It has filled my heart with pride to visit the doctors at work in their several communities. Aside from their duties in the

care of the sick, they are making themselves useful in all organizations which look to the betterment of their communities. I am sure of this one fact that the doctors of our State represent the finest cross-section of our American manhood. I would make a most earnest plea to every doctor in this audience to resolve anew to stand by and make his society accomplish much during the coming year. You will always receive 100% return on your efforts.

I would call to your attention the marked interest shown in our monthly meetings held in the various counties and would like to make mention of the splendid constructive interest shown in two of our larger counties, Richland County and Greenville County. These societies have brought to our State some of the best medical thought of our nation. With a great deal of pride we can point to the fact that South Carolina has a Health Department in every county in the State. We are the only southern state with a hundred per cent service, Alabama having 88%; Louisiana, 63%; and North Carolina, 62%. Of the 1402 doctors in South Carolina all are members of this organization except 80—an all-time high record for membership. The spirit of unity and cooperation which characterizes the South Carolina Medical Association is in large measure responsible for your excellent record. In this connection may I thank you all for your interest in the Association, and commend the young doctors for entering our Association and for their active contributions to the programs and discussions at our meetings.

Perhaps there is no one thing which binds us together as a fraternity serving human need more than do the high ethical principles which control in our relations to one another and determine us in our attitude toward our patients. The machine age and good roads have made it necessary in a small degree to rewrite our code of ethics. However, it has not changed the guiding principles of fair play to our fellow doctors. It is no uncommon thing for a patient to show up at your office and mine who has traveled many, many miles in the hopeless search of relief. We have a responsibility to the patient and also to our fellow doctors. Let us be fair and charitable in

our relationships to one another. The Golden Rule provides the foundation of our ethical standards. I have been impressed with the high ethical practice of the doctors of our State. May we all remember that there is enough glory and enough heartache for all.

While it is not the purpose of this paper to discuss medicine in its relation to National Defense, you will allow me to declare in a word that the doctors of South Carolina, and indeed may I not say the doctors of America, hold themselves in readiness to serve the health of our nation in camp, at sea, and in the air. In our local communities we will participate in such measures as will safeguard and restore our soldiers and sailors from the invasion of disease.

In considering a subject for this address, I find myself inclining toward the human factor in medicine. I have decided to get away from the discussion of some scientific phase of medicine and from the much discussed problem of socialized medicine. Personally I have no fear now, nor do I have fear for the future of medicine or the doctor who is guided by a sincere and noble understanding of the great principles and responsibilities of our profession. Nothing can ever replace the firmly established relationship between the trusting patient and the trusted doctor. As I grow older in the practice of medicine and more mature in life and thought, I am convinced of this one truth: That we of the medical profession must at all times keep this one thought foremost—that ours is a life of service to bring relief from disease where it is possible, to bring hope to the cheerless and courage to the faint in heart. There is no hour of the clock exempt from this high call. I trust that it may not be indelicate for me at this point to quote a statement made recently at the Connecticut State Medical Society by one of our distinguished guests on this occasion. Dr. Lahey said: "There is no substitute for long hours and hard work. I think it is a misfortune that there is a tendency, it seems to me, to overlook the fact that long hours and hard work are the things that have built our characters and the characters of our parents." I love to think of the faith, trust, and hope that our patients have in us. There is never a day that

passes but some opportunity presents itself to us to be of real service to those in trouble.

It was my privilege to have a part in the dedication of the Simms Memorial Hospital at Lancaster last June, an institution so largely sponsored by the Commonwealth Fund. Mr. Smith, representing the Fund, in presenting the hospital to Lancaster, said, "We want this hospital to be devoted to the *scientific* and *sympathetic* care of the sick." No medical care can be rendered with greatest effectiveness without love and sympathy. In his address to the graduating class of the Medical College of South Carolina, Dr. W. L. Lingle gave emphasis to this thought, saying, "The ideal doctor should be an accomplished scholar, a cultured gentleman, and an humble Christian."

In full appreciation, then, of all the scientific preparation our medical colleges give us, and all of the advantages arising from internships and scientific renewals gained from occasional clinics, and in full appreciation of all the services rendered through community, county, state, and federal medical service, I want to bring to your attention afresh in this last moment a phase of medicine dealing with the human at the point where mind and matter meet.

The swift uprising of psycho-clinics throughout our land and the late development of religious cults dealing with mental estates of man indicate that there is a very vital need for us as doctors to be far more than peddlers of pills. In a world where pressures upon the emotional and mental areas abound, as is the case in this hour of contemporary history, we doctors need to be equipped to enter every sick room and every hospital ward, remembering that in many cases the question of the patient is still the Macbeth question to the doctor: "Cans't thou minister to a mind diseased, Pluck from the memory a rooted sorrow, Raze out the written troubles of the brain, And with some sweet oblivious antidote Cleanse the stuffed bosom of that perilous stuff Which weighs upon the heart?"

Specific therapy for such a questioning heart is insufficient. Such evident distress has its origin in no functional disorder, nor does it result oftentimes from the invasion of life centers by germs that would deal death to the patient. It is a condition made possible by the

truth of Milton who wrote in his blindness: "The mind in its own place, and in itself Can make a heaven of hell, a hell of heaven." What answer can we give to the man who sits, chin in hand, like Rodin's "Thinker" and queries in the language of Hamlet, "To be or not to be, that is the question." To all of us in serious mood there comes such an hour. This fact should enable us to approach every bedside in the spirit of the ancient prophet who declared, "I sat where they sat." This spirit is of greatest importance. For, very often our ministry is to a condition which physical therapy can never touch, involving problems which no microscope can diagnose and no scalpel eradicate. They are conditions which flit like shadowy spirits, veiling life's outlook, dulling life's hope, subduing life's courage. Such a condition demands a healing deeper than the physical. Adequately to meet the need, we should walk in fellowship with Him who is the Great Physician. By His gentleness and patience and understanding sympathy, as well as by His divine power, He brought hope and courage and the will-to-live to the multitudes who sought His healing ministries. In like manner it is our privilege, and should be our holy ambition, to move among our patients as those whose happy hearts do them good like a medicine, radiating by our very presence a spirit of confidence and hopefulness which more than many a medicine begets returning strength to atrophied sinews.

This ministry applies to life all along the way from swaddling clothes to shroud. The doctor is present when life emerges into conscious being with all its attendant mystery and wonder. The doctor is also present when life vanishes from bodily presence with all the attendant mystery and awe.

Think of what an understanding doctor can mean to the child as life unfolds and develops. From the vantage point of your years and experience look back upon the child as he stands at the threshold of life. He is amazed at the marvelous disclosures of the world about him, as it grows larger and larger. Biological advances within his growing structure fill him with wonder—sometimes with fear. For these advances are generally accompanied by new emotional experiences, new intellectual adventures, new social adjustments. Bewildered

by it all, without the steadying and guiding hand of an understanding friend the child may conclude that life is a toy to be played with rather than a set of forces and impulses to be wisely governed and to be consecrated to high endeavor. Such a conclusion would invite shipwreck before the sails are well unfurled, and would transform what might have been a glorious voyage into a holiday tragedy.

Surely, then, we should not under-estimate the importance of wholesome association and counsel with life in its early stages. Only thus can we help to guarantee to life in its meridian heat the glow and power which belong to a noble maturity. Then, too, we may confidently anticipate an evening of stillness and peace, when

"Time claims his tribute: silent now the lyre;
The curfew bell reminds us—cover up the fire."

For it is in the evening of human experience, when man hears the call,

"It is time to be old
To take in sail,"

that this ministry is greatly needed. The roseate hues of youth have paled. The tempests of middle life have abated. Stealthily the mood to sit by the raked up ashes of the past and spread the thin hands over the whitening embers asserts itself. Memory takes the reins and reflection becomes the habit. For such a day medical science and surgical skill can make but small contribution. But it is just here that understanding friendship and cheerful ministry yield an unfailing harvest of renewed hope and joy to the patient and of love and gratitude to the doctor.

Finally, do we have a ministry to life when it approaches inevitable separation of flesh and spirit, with all the attendant hopes and fears that crowd such hours? It is the period, as Holmes reminds,

"When the iron portal shuts behind us,
And life forgets us in its noise and whirl,
Visions that shunned the noonday find us,
And glimmering starlight shows the gates of pearl."

Having attended life at its baby beginning and ministered to it through all its fitful fevers, it now becomes us to understand that they also serve who only stand and wait. To watch and wait in understanding sympathy in a dimly

lighted room while a stoical father beats back the surging tide of grief and a suffering mother stifles a sobbing spirit, as together they await the child's last quivering pulse, this too it is to be a doctor. Where all the healing virtues of medicine and surgery have ceased, this phase of medicine remains—and demands our most skillful and delicate ministry.

And now in closing, may I suggest that to be this kind of doctor brings one into the upper room of the medical fraternity and into fellowship with the immortals of our profession. In this room they lived and labored. Scorning ease and spurning self-aggrandizement, they have walked in the footsteps of Him who came, "Not to be ministered unto, but to minister." And for their fellowmen has burned the passion, that they might have life and have it more abundantly. But while, as we have said, this spirit characterized the immortals of our profession, we are quite sure that no doctor, however far short he may come in its realization, can be satisfied to cherish any lower ideals for himself. To us these stalwarts call, "Friend, come up higher." In this day of the world's agony and distress may we, one and all, heed the call.

Then, when we have served our own generation with all the scientific wisdom known to us: When we have brought our ministry, as best we were able, into the inner sanctuary of man's being, may we not recall with Kipling these lines of expectation:

"When earth's last picture is painted, and the
tubes are twisted and dried,
When the oldest colours have faded, and the
youngest critic has died,
We shall rest, and, faith, we shall need it—lie
down for an aeon or two,
Till the Master of all good workmen shall set
us to work anew!

And only the Master shall praise us, and only
the Master shall blame:
And no one shall work for money, and no one
shall work for fame:
But each for the joy of the working, and each,
in his separate star,
Shall draw the thing as he sees it for the God
of things as they are!"

Thyroidectomy

A Review of Experiences and Complications In Doing One Hundred and Twenty-Five Thyroidectomies

L. H. McCALLA, M. D., F. A. C. S., GREENVILLE, S. C.

In 1938 there were 256 thyroidectomies done in South Carolina with 8 deaths. This information was obtained from the Duke Endowment headquarters and covers ninety-five per cent of all general hospitals in the State. The number of complications, the prevalence of cancer and Riedel's Strumas are not easily available but I believe a study along this line would be interesting and informative.

In reviewing my cases there were 2 deaths. There was one case of parathyroid tetany, 3 cases of recurrent nerve injury, 3 adenocarcinomas, 3 Riedel's Strumas, and 3 recurrences.

Death No. 1. A man 30 years old who had been treated over a period of several years with iodine and X-ray. When first seen the symptoms were mild but definite. He had other associated symptoms which could not be definitely accounted for, namely, frequent headaches and temperature elevation over a period of several weeks. This patient was studied by myself and consultants and it was concluded that a thyroidectomy was the best procedure. He and his family were told that a thyroidectomy would benefit his health, but that he possibly had other troubles of undetermined origin. He was operated upon and the thyroid gland removed with considerable difficulty due to adhesions. Following operation his condition was good and the next day he was hoarse, which I thought was due to tracheitis. On the fourth day all skin clips were removed and his condition was satisfactory. On the fifth day he developed a severe headache, became unconscious and developed difficulty in breathing. On the sixth day he died. Autopsy revealed a cerebral hemorrhage from a small tumor.

Case 2. An old lady 65 years old who had been operated on 15 years ago in Ohio for toxic goiter, but had never been well during that period. At the time she had a palpable thyroid which extended above the sternum and down into the mediastinum. Her B. M. R.

had ranged between 35 and 45 but her general condition seemed to be very good. She was treated over a period of 10 days with iodine and bed rest. After that time it was thought that her condition was satisfactory for an operation. The tracheal tube was passed and she was given intratracheal anesthesia. The substernal portion of the gland was removed after dissecting through considerable scar tissue which had resulted from her previous operation. During the procedure her pulse rate went up to about 150, which came down to about 130 when she left the operating table. She was given fluids, and the afternoon of the operation was doing very well. During the late afternoon her pulse and temperature began to climb. Her temperature reaching 106 and she died in a thyroid crisis.

In reviewing these cases, case number one was an unforeseen calamity. The second case made me realize more fully that an old person with long standing thyroid intoxication does not stand a surgical procedure nearly so well as a younger person. Due to the location of the thyroid tissue in this case the operation could not be divided into stage operations so well. When this patient was first seen, frankly, such an outcome was not contemplated. In treating another case of this type the most conservative method available will be used.

There was one case of parathyroid tetany which developed three days post-operatively. The onset was a convulsive seizure which was controlled immediately with intravenous calcium. Calcium therapy was continued over a period of a year and since that time this case has gone along without any therapy, apparently in good health.

There were two cases of mild myxedema. One patient had a low B. M. R. pre-operatively, about -20. She had a resection of a multiple adenomatous cystic thyroid which was removed for obstructive symptoms and the possibility of early malignancy. She has continued

to run a low B. M. R. which is controlled very well by daily doses of thyroid extract.

Case 2 was a hyperplastic type thyroid who developed symptoms of myxedema, several weeks post-operatively, of a mild degree. She has been taking thyroid gland periodically over a period of three years and gets along very comfortably.

There were three cases of recurrent nerve injury. Two of these cases gave very little trouble, with complete recovery after several months. The third had stridor and hoarseness and difficulty in breathing after exertion. She was advised to have a tracheotomy which she refused. She was an elderly person and had had toxic adenomatous goiter over a number of years and had considerable heart damage. She died suddenly six or eight months following operation. I have been unable to learn the details of the cause of her death.

There have occurred three cases of adenocarcinoma in this series. All of these growths were encapsulated and diagnosed post-operatively by a pathologist. They have shown no evidence of recurrence.

There have been three cases of Riedel's Struma. In one case after the gland was exposed and adhesions noted, it was decided that it would be impossible to remove the gland without doing a very mutilating operation. A section of the gland was removed for biopsy and a drain put in. The pathologist's diagnosis was Riedel's Struma. Following this procedure the gland subsided and after a few months became soft and apparently subsided completely. At this time the patient is apparently completely well.

There have been three known recurrences, one of the hyperplastic type with an inadequate removal of thyroid tissue, and two other cases of recurrences with adenomatous type goiters where a large cyst adenoma was removed from one lobe; later an adenoma developed in the remaining lobe. As a general rule both lobes are resected.

The vast majority of patients suffering with hyperthyroidism obtain marked relief of their symptoms following proper surgical procedure. I do not know another group of patients who are more appreciative and cooperative.

There are several important matters to be considered before actually undertaking the operation. First, be sure of the diagnosis, for obviously removing the thyroid gland that is not responsible for your patient's symptoms is not going to produce good results. The removal of the normal appendix will do little harm, but the removal of a normal thyroid gland with the risk of parathyroid damage or recurrent nerve injury and myxedema is a distinctly harmful procedure.

It is important to estimate the degree of toxicity of the patient in order to select the proper operative procedure and to resect the proper amount of gland tissue. It is well in the older group to be more conservative with your surgical procedure than the younger group. Older people do not handle thyroid intoxication as well as the younger group.

Anesthesia is important. The use of the tracheal tube is helpful and most times essential when delivering a substernal goiter. In the mild cases I prefer local anesthesia, feeling that I can protect the recurrent nerves better when using this procedure. The parathyroid glands can be protected as a general rule by knowing their location. It is an advantage in some cases to expose the recurrent nerve in order to protect it. I do this occasionally but not routinely. The prevention of myxedema as a rule is not so much a problem if the technique of your operation is properly planned.

Now in the actual technique in a thyroidectomy the three most important factors to my way of thinking are: good exposure—dissect the upper flap high in order to have easy access to the upper pole. Cut the prethyroid muscles if better exposure is needed. Second, keep the field free of blood so you may see what you are clamping and cutting. Third, good anesthesia. If a general anesthetic is used the patient should not be too deep, but relaxed. Struggling and excitement should be avoided. Sometimes it is well to combine general and local anesthesia. Preoperative sedatives and mental relaxation before the patient reaches the operating table are important.

In reviewing these cases we find such complications as parathyroid tetany, myxedema,

recurrent nerve injury and other complications comparatively low. It is possible that other symptoms of recurrences will occur at a later date.

A number of these cases reviewed have been adenomas with low toxicity. A number have been of a mild hyperplastic type which seems to be characteristic of this state. The symptoms are as characteristic as the more toxic cases but milder. The improvement following operation is gratifying.

Some have been of the very toxic type but my impression is the proportion is less than are found in the so called goiter belt. I hope to classify these cases more definitely at a later time with this study in mind.

SUMMARY

This is a general review of case reports of deaths and complications involved in doing 125 thyroidectomies, and suggestions how some of these complications may be avoided.

BOOK REVIEW

THE RATIONALE OF COMPLETE IMMOBILIZATION IN TREATMENT OF INFECTED WOUNDS

Wm. H. Prioleau, M. D., F. A. C. S.
Charleston, S. C.

In a recently published book, Dr. Trueta gives his experiences at the base hospital in Barcelona in the late Spanish Civil War with the treatment of infected wounds by complete immobilization. The wounds were first thoroughly prepared by cleansing with soap and water and debridement. A dry gauze dressing was applied—following which the wound was firmly encased in a plaster cast, including the joint above and below. The casts were changed at intervals of 2 to 5 weeks. In the meantime the dressing remained undisturbed and the wounded region completely immobilized. As expressed by the author the success of this method of treatment was striking. It is accounted for by a number of factors. The rationale of this method of treatment is considered in an article by the author in the *British Medical Journal**.

There is quite conclusive experimental evidence that bacteria from a wound are spread mostly by means of the lymphatics, likewise the toxins to a great extent. Thus any measure that will reduce the flow of lymph through a limb will decrease the absorption of bacteria and their toxic products. It is well known that it is difficult to obtain lymph from a limb at rest, whereas massage and exercise will pro-

mote a good flow. By complete immobilization of the limb the flow of lymph is greatly reduced. Bone and joint immobilization is not enough — as this does not prevent muscle activity, especially muscle spasm. Soft tissue immobilization is necessary if the limb is to be at rest and the flow of lymph reduced.

A wound so treated presents an intact granulating surface which is impermeable to many varieties of bacteria which continue to exist underneath the dressing. This is in contrast to the disruption of the granulating surface permitting the introduction of organisms where dressings are frequently changed. A change of cast is attended by an elevation of temperature which is accounted for by disturbing the granulating surface and increasing the flow of lymph.

The use of antiseptics is decried, being considered ineffective against bacteria and harmful to tissues.

In brief, the infected part is placed in the most favorable condition to prevent the entrance of bacteria from wound surface, and the spread of bacteria and their toxic products by the lymphatic circulation. An undisturbed intact granulating surface, and a greatly reduced lymph flow go far ahead toward accomplishing this.

* (1) Trueta—*Treatment of War Wounds and Fractures*—Paul B. Hoeber Inc., N. Y. 1940.

* (2) The Rationale of Complete Immobilization in Treatment of Infected Wounds—J. Trueta and J. M. Barnes, *British Med. Jour.*, July 13, 1940.

THE JOURNAL

OF THE

South Carolina Medical Association

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Original manuscripts, subject to approval by the Editor and the Editorial Board, are desired for publication in the Journal. They should be typewritten, double spaced, on 8½ x 11 paper. References should be complete, and only such as relate directly to statements quoted in the paper. Illustrations will be used as funds permit, or as authors are willing to bear the necessary increase in cost. Short original articles are preferred to long reviews.

Office of Publication: (In care of the Editor)

Florence, S. C.

Subscription Price

\$3.00 per Year

MAY, 1941

"Much outcry, little outcome."

So said the old sage, Aesop, some twenty-six hundred years ago, and so say we, the newly appointed Editorial Board and Editor, as we make our bow with this issue of the Journal.

Deeply appreciative of the honor bestowed upon us, fully aware of the responsibility which we are asked to assume, we are ready and anxious to tackle the task which lies ahead and to do the best we can. Building upon the firm foundations which have been laid by Dr. E. A. Hines, Dr. J. I. Waring and their associates, we hope to publish a medical journal of which every member of the South Carolina Medical Association will be proud. More than this we dare not say. This issue of the Journal, and the next, and the next must do our speaking for us.

THE NEW EDITORIAL BOARD

The Council of the South Carolina Medical Association at its recent annual session, discussed the problems and possibilities of this Journal, and one of the points under discussion was that of an Editorial Board. The Council was fully aware and appreciative of the assistance rendered by the Departmental Editors in the past and was reluctant to take any action which might seem to be a vote of lack of confidence in this splendid group of men. The Council felt, however, that the purposes of the Journal could be served best by an Editorial Board which would be representative of

each section of the state, and adopted the following resolution:

"The publication of the Journal of the South Carolina Medical Association shall be the direct responsibility of the Editor.

"To assist the Editor, the Council of the South Carolina Medical Association shall appoint an Editorial Board of eight men, one man to represent each district of the Association. The appointments shall be for a term of one year. One member of the Editorial Board may be designated as Assistant Editor.

"It shall be the duty of the Editorial Board to meet as a body at least once a year and to advise with the Editor with regard to the Journal. Furthermore, the services of the individual members of the Editorial Board shall be available to the Editor at all times in the reading and criticism of submitted manuscripts, correction of proof, solicitation and preparation of articles, book reviews, securing of news relative to the medical profession, and in such other matters as the Editor may desire."

Following the passage of the resolution, the following men were appointed to serve on the Board for the coming year:

- District 1, Dr. James O'Hear, Charleston.
- District 2, Dr. D. F. Adcock, Columbia.
- District 3, Dr. C. H. Blake, Greenwood.
- District 4, Dr. R. M. Pollitzer, Greenville.
- District 5, Dr. C. S. McCants, Winnsboro.
- District 6, Dr. W. R. Mead, Florence.
- District 7, Dr. C. F. R. Baker, Sumter.
- District 8, Dr. O. Z. Culler, Orangeburg.

THE GREENVILLE MEETING

Over four hundred members of the South Carolina Medical Association attended the annual meeting in Greenville and as they left they carried with them the memory of a splendid scientific program, delightful social gatherings, and true Southern hospitality.

The members of the Greenville County Medical Society, under the able leadership of Dr. Clyde Ariail and his committeemen, outdid themselves in making the members welcome and in giving them a royal time. Dr. Jack Jervey and his Scientific committee presented a program which has not been equaled in recent years. And the ladies of the Auxiliary spared no pains in affording their guests the best there was in entertainment.

The invited speakers were outstanding. After hearing Dr. Frank Leahy, one of the members of Council expressed the sentiment of all when he said, "There is no doubt in my mind that Frank Leahy is the outstanding medical orator and the outstanding physician in America today." Dr. J. E. Paullin of Atlanta gave a clear and penetrating analysis of National Medical Defense which left none of his hearers uncertain as to the gravity of the situation which confronts this country today. Drs. A. B. Cannon and Oscar Miller presented clinics which were filled with everyday problems and practical solutions, to the delight of all privileged to attend them.

But to no one should more credit be given than to the presiding officers, the retiring president, Dr. W. L. "Buck" Pressly. For twelve months he had worked as hard and as diligently as has any President of the Association, and the annual meeting was but the climax of his year's work. His speech, printed elsewhere in this Journal, is a masterpiece and will bear reading and re-reading.

To those who have been mentioned and to those others who "toiled although unseen" the members of the Association owe a debt of sincere gratitude.

THE NEW PRESIDENT AND PRESIDENT-ELECT

To the new President, Dr. George Truluck of Orangeburg, and to the President-Elect, Dr. Tom Pitts of Columbia, the Association extends its heartiest congratulations and pledge of cooperation.

T. A. PITTS, PRESIDENT-ELECT

Thomas Antley Pitts was born in Edgefield County in 1893. Following elementary education at Newberry College he was graduated from the S. C. Medical College in 1916. After serving his internship and residency at Roper Hospital he became full time instructor in Pathology at the Medical College. From this post he entered the army and was attached to the Royal Army Medical Corps (British) and was finally elevated to the rank of Battalion Medical Officer.

Returning to civilian life he started general practice in Saluda and then accepted a position as Assistant Superintendent and Director of Laboratories at the Shreveport Charity Hospital, Louisiana, where he stayed for two years.

In 1923, after a year of post-graduate study in Radiology, he returned to South Carolina to assume the position of Radiologist and Pathologist at the Baptist Hospital in Columbia—a position which he still holds. He is also Radiologist to the Providence Hospital in Columbia, and Consulting Radiologist to the S. C. State Hospital, the Newberry County Hospital, and the Cancer Control Division of the S. C. Board of Health.

He is a member of the Columbia Medical Society (President 1927), the A. M. A., and the Radiological Society of North America. He is a Fellow of the American College of Physicians and a Fellow of the American College of Radiology. He is President of the Board of Trustees of the Medical College of South Carolina. He has been a member of the Council of the S. C. Medical Association for ten years and Chairman for five years. He has edited the Recorder of the Columbia Medical Society since its incipency.

In 1928 he married Miss Ellen Douglas of Elmwood, Nebraska, and his present home address is 1725 Maplewood Drive, Columbia.

PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

"DO'S" AND "DON'T" IN WRIST FRACTURES

J. Warren White, M. D.,
Greenville, S. C.

In a brief discussion of the treatment of Colles' fractures one must necessarily touch only on the very high spots. It is my intention here to emphasize the commoner errors that I have made personally as well as those made by others in this type of injury.

First: Don't use too little effort in improving a malposition. We are prone to try to "set" a fracture without bothering with an anaesthetic, and if we do attempt it, we do it in a timid sort of way, simply hurting our patient without accomplishing anything. If a reduction without an anaesthetic is necessary, it should be done courageously both by the patient and the physician, remembering that the pain associated with an insufficient effort is not much less than with a determined successful one.

Second: Do inspect frequently, if splints are used, which incidentally I feel should be discouraged, or take enough X-rays through the cast to be positive about the position, recalling possible previous chagrin when a cast was removed several weeks after a perfect reduction had been proven by X-ray, only to find an ugly angulation. Always remember that with the matting down of the padding, subsidence of swelling and moderate but inevitable atrophy, casts and splints become loose and inefficient. X-rays are cheaper than possible, and maybe justifiable, lawsuits.

Third: Remembering that the commonest deformity in wrist fractures is shortening of the radius, *do* be sure to have adequate ulnar deviation, particularly in elderly people with senile osteoporosis. This can be done only poorly with splints, which fact is another argument in favor of a plaster cast.

Fourth: Don't take off splints or casts too soon. Some good alignments have an unexpect-

ed and embarrassing way of bending even after a three weeks' period of immobilization. Be sure to keep close watch of the wrist for at least a couple of weeks following the removal of apparatus.

Fifth and last: *Do* follow your cases through for several months. Your interest will react favorably on the patient, and you will get more satisfaction out of a good job. If it doesn't turn out well be sure to know it first and start doing something before the patient demands it.

INFECTIOUS DIARRHEA Practical Points in Treatment

The season for infectious diarrhea in children is fast approaching and every physician in South Carolina dealing with infants and children will soon have this condition to treat. Fortunately, the number of cases of diarrhea is decreasing each year but as long as unsanitary conditions persist in many homes and ignorance prevails the disease will continue to appear.

With the passing of the years our knowledge of treatment in this condition has increased and today the vast majority of cases can be saved if they are seen in the early stages.

At the Pediatric Seminar in Saluda last summer there was a full and free discussion of the treatment of infectious diarrhea and the consensus of opinion of leading pediatricians from various southern states appeared to be as follows:

Prophylaxis. The two greatest aids in prevention are the boiling of all milk used for children during the summer months and the screening of houses, particularly of the kitchen and dining room.

Laxatives. At the onset of the disease a mild laxative such as milk of magnesia should be administered. Purgatives such as castor oil and calomel probably do more harm than

good. Once the diarrhea has become marked, laxatives and purgatives are contraindicated.

Sedatives and anodynes. For the restlessness, phenobarbital and bromides are valuable; for sleeplessness, elixir of amytal or numbital. Paregoric is of value in combatting abdominal pain but should not be given for its constipating effect. For tenesmus, a salve containing a local anesthetic may be applied to the anal sphincter region.

Specifics. Sulfapyridine, and more recently sulfathiazol, appear to have a specific action upon the dysentery bacillus (in nine out of ten cases in which there is blood and pus in the stools, the dysentery bacillus can be found on culture). Relatively large doses should be given up to a maximum of one grain per pound of body weight per day. However, the drug should not be given beyond a period of forty-eight hours without a urinalysis and a leucocyte count.

Liquids. The diarrhea and the accompanying acidosis should be combatted with large amounts of fluids by mouth. Karo water, 5% glucose or lactose solution, weak sweetened tea, lemonade or strained and diluted orange juice may be given along with plain boiled water. Should vomiting be a prominent factor, immediate arrangements should be made for the giving of fluids parenterally (normal saline, glucose, lactate Ringer's solution). If this cannot be done in the physician's office, the patient should be transferred to a hospital without delay.

Transfusions. In the severer or more protracted cases, blood transfusions are of life saving value and should be given early.

Diet. Following a short period of starvation, the child should be placed upon some form of modified milk—lactic acid milk being the preparation of choice. Fresh buttermilk is also good although many small children will not take it. Rice gruel is also valuable during this stage.

After the fever and acute symptoms have subsided, the child should be given a bland, non-irritating diet and should be kept on this diet for several weeks.

QUININE FOR CHILDREN

Quinine is still the drug of choice in treating malaria in children. Unfortunately, quinine is highly unpalatable and it is difficult to disguise the taste. Many chocolate preparations are on the market today and while some of these are good, others are as "bitter as gall." Furthermore, some of these preparations are unstable and when they stand for any length of time on a druggist's shelf there is a tendency for the drug to settle to the bottom of the bottle. Finally, these preparations are so made that it is difficult to increase or decrease the amount of drug as desired.

To obviate these difficulties, a number of physicians in the Pee Dee section of the state have accustomed themselves to the writing of a prescription which is freshly prepared, stable, relatively palatable, and to which any desired amount of quinine can be added. It is presented herewith for the benefit of any other physicians who might wish to try it:

The desired amount of quinine is dissolved in a small amount of Vinatone and to this is added Syrup of Juvans as a vehicle.

Sample prescription: (To contain three grains of quinine to the dram). Quinine sulphate grs. 72, Vinatone drams 1, Syrup of Juvans q. s. to make 3 ounces.

Dissolve quinine in Vinatone and add syrup.
Sig: One dram t. i. d.

April 18, 1941

Editor

J. S. Carolina Med. Assn.

Dear Sir:

The Illinois State Department of Public Health and the Children's Bureau, U. S. Department of Labor is sponsoring ten 4-week courses in obstetrics at the Chicago Lying-in Hospital during the fiscal year 1941-1942. Only a limited number of physicians will be accepted for each course. The only cost to the individual is for room and board and \$25.00 (\$10.00 of which is refunded at the completion of the course). Applications and inquiries should be addressed to: Postgraduate Course, Department of Obstetrics and Gynecology, 5848 Drexel Avenue, Chicago, Illinois.

Very truly yours,

H. Close Hesselstine, M. D.

MEDICAL SUMMARIES

ACUTE HYDRAMNIOS

JACK D. PARKER, M. D.,
GREENVILLE, S. C.

In the two general hospitals of Greenville, during the past ten and eight years respectively, there have been 7,110 deliveries, including all private and service cases. During this time the diagnosis of an acute hydramnios has been made only once, and, unfortunately, on the case that I am to report it was not made until after incorrect treatment had been rendered as a result of an incorrect diagnosis.

This situation, in contrast to the usual hydramnios seen, is definitely an acute obstetrical emergency usually necessitating the termination of the pregnancy. The usual hydramnios seen is one in which the increase in the amount of amniotic fluid, normally one to two liters, is gradual, often producing little discomfort or difficulty in management; but in the acute type, the increase in fluid is sudden, occurring usually in a few days. Under normal circumstances, the amniotic fluid is thought to be derived from the body fluids of the mother with some further action by the amniotic epithelium, and even in these massive increases in amount, no particular change in the composition of the fluid takes place.

No definite single etiological factor has been proven, and from studies reported, it seems probable that several different causes might produce hydramnios, but the majority of these produce the gradual increase of the chronic hydramnios rather than the rapid increase of the acute hydramnios, save one exception, and that is upon the theory of an acute infection of the amniotic epithelium, or the so-called amnionitis. If the idea of the amniotic epithelial activity on the maternal fluids is accepted as a source of the amniotic fluid, then, dependent upon the degree of epithelial disturbance, this might offer a correct answer as to the etiology of acute hydramnios. In the order of their importance, the following conditions are thought responsible or usually associated with increase in the amount of amniotic fluid:

1. Inflammatory or infectious changes in the amnion—the so-called amnionitis.
2. Interference with fetal circulation, either in the cord or within the fetus.
3. Maternal diseases, such as cardiac or renal failures, leading to oedema of the placenta with increased transudation into the amniotic sac.
4. Various monstrosities—although amnionitis may be responsible for the monstrosities before the appearance of the hydramnios.
5. Increased renal activity with accumulation of fetal urine. Wolff produced hydramnios (chronic type) in rabbits by doing nephrectomies on pregnant rabbits with a resulting increased renal activity in the fetus.
6. Twin pregnancies, particularly the uniovular type.
7. Syphilis.

The findings as previously mentioned, are a result of the sudden, enormous and distressing distention of the uterus with fluid, and are enumerated as follows:

1. Severe, unrelenting abdominal pains, usually of two or three days duration.
2. Dyspnoea, cyanosis and oedema of the lower extremity and probably the vulva—these purely of mechanical origin.
3. Nausea and vomiting, probably also mechanical.
4. A sudden increase in the size of the abdomen and appearance of a pregnancy much farther advanced than actually exists.
5. A tense abdominal wall with an inability to outline the fetal parts and difficulty in locating the fetal heart.
6. Rectal examination may reveal an effacing cervix or even some bulging of the membranes through a slightly dilated cervix.

As to a differential diagnosis of acute hydramnios little need be said other than mentioning four conditions that offer a somewhat similar picture.

1. Multiple pregnancy, which is frequently complicated by hydramnios, both the chronic and acute types.
2. Large ovarian cysts. Cases have been reported in which laparotomy was erroneously performed.
3. Premature separation of the placenta, a diagnosis of which led to the incorrect treatment in this case to be reported.
4. Abdominal ascites.

A careful history and examination, plus X-ray findings, and the absence of evidence

of hemorrhage should prevent confusion in differentiation of these conditions.

Treatment:

Minor grades of hydramnios rarely require any active treatment, but in the acute type immediate treatment is necessary. This consists in rupture of the membranes and a termination of the pregnancy, regardless of the stage to which it has progressed.

Rapid escape of the fluid should be prevented in an effort to avoid a prolapsed cord or foetal extremity, or a partial or complete placental separation and the resulting hemorrhage, or, even without hemorrhage, considerable shock. It should be kept in mind that the overdistention of the uterus increases the chances of delayed or prolonged labor and of postpartum hemorrhage, and that the incidence of abnormal presentations is definitely increased.

CASE REPORT

A white primipara, age 18 years, admitted on my service at the Greenville General Hospital complaining of severe abdominal pain. Due to my absence from the city she was seen by an associate on the service, who obtained consultation with a chief, and delivery was effected and findings recorded by them. Her menstrual history was that of a seven months pregnancy, although the size of her uterus appeared to be at or near term. Her abdominal pain had been continuous and severe for three days before admission, except for periods following morphine given by her family physician. Both the patient and her mother had noted that the abdomen had enlarged considerably during the preceding week. She had no vaginal bleeding.

Upon physical examination the mucus membranes were of good color, pulse 60, temperature normal, and blood pressure 135/90. She was crying and groaning continuously with abdominal pain. Her uterus, which measured 33 cms. above the symphysis, was firm and tender and did not relax as long as it was observed. Foetal parts could not be felt, and the foetal heart was located with difficulty. Rectal examination revealed the cervix effaced but only one cm. dilated. The bag of waters could be felt, but no presenting part.

Due to the tender, contracted uterus, premature separation was suspected, but as there was no evidence of hemorrhage or shock, she was given morphine and nembutal and observed for eight hours. During this time an X-ray was made of her abdomen with the following report: "Single uterine

pregnancy; vertex presentation. The head is engaged and the back lies to the mother's right. Almost full term."

Eight hours after admission her condition was unchanged, and, after consultation, it was decided that the best solution was to terminate pregnancy by section. The baby was apparently alive and viable, and the mother was nearing exhaustion. In addition, premature separation was suspected. A low cervical section was done with a transverse incision through the lower uterine segment. When the uterus was opened large quantities of amniotic fluid escaped, and a baby weighing two pounds and ten ounces was delivered. The foetal heart was beating, but respirations could not be established. The mother made an uneventful recovery and was discharged on the thirteenth day.

This case is reported on account of the rarity of the condition and to bring it to the attention of others with the hope that a similar error in diagnosis will not befall their lot.

I wish to express my appreciation to Dr. R. M. Dacus for his aid in this case.

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Literature furnished on request

HYNSON, WESTCOTT & DUNNING, INC.
BALTIMORE, MARYLAND

AROUND THE STATE

Effort will be made to secure and publish news concerning the activities of individual physicians, and of the various medical societies of the state. Members of the Association, and especially secretaries of county societies, are urged to send in news items to the Editor.

SIDELIGHTS OF THE GREENVILLE MEETING

Dr. Clyde Ariail buying carnations for the officers to wear as they faced the camera.

Dr. W. H. Poston the first to register.

Dr. J. D. Guess sporting a derby.

Dr. Adam Hayne arriving early as usual and as ever, replete with stories.

Dr. Warren White hurrying hither and yon getting the hall ready for the meeting.

The lobby of the Poinsett Hotel resembling bees in a beehive; some humming, some flying here and there, some sitting, and one dozing.

The Greenville physicians, most genial of hosts, making everyone welcome and at home.

A committee chairman receiving applause when he promised to make his report short.

Dr. Wilkie Jervey in his usual seat on the front row at the meeting of the House of Delegates.

Dr. A. T. Moore walking around with a bunch of X-ray films under his arm.

Dr. J. R. DesPortes and Dr. C. R. May with their usual cigars.

Dr. Buck Pressly chafing at the bit as the crowd gathered all too slowly in the lecture hall.

Dr. Tom Pitts receiving congratulations upon his election to the office of President-elect.

Dr. Frank Leahy suffering twinges of pain in his back, the result of an over-enthusiastic swing at a golf-ball,—but in spite of this, delivering as masterful an address as the Association has ever heard.

Dr. Walter Mead entertaining two colleagues at breakfast.

Dr. Buck Pressly, retiring president, entertaining the past-presidents, the council, and other friends at a private dinner Tuesday night.

The House of Delegates passing a resolution of sympathy, upon hearing of the death of Dr. Stewart Roberts of Atlanta.

Many physicians taking notes in the handy

program-pad given to each member of the Association by Provence-Jarrard Co., Printers.

A committee, with Dr. Hugh Smith as chairman, journeying to Seneca to inspect the State Association office and library.

The parade of patients with various skin lesions seen in Dr. A. B. Cannon's clinic.

Drs. Claude Searse, James McLeod, and Bob Durham receiving congratulations upon their election to the Council.

Dr. Archie Baker having his shoes shined for the President's Ball.

Dr. George Truluck watching all proceedings with careful eye in view of his coming year's work as President of the Association.

Dr. George Wilkinson and his cigarette holder.

Managers of exhibits talking to this and that physician on affairs, medical and otherwise.

Dr. M. W. Beach declaring on Wednesday afternoon that he was tired, intimating that his ability to withstand speeches had decreased in recent years.

Dr. Jim Fouchee presiding over a group of enthusiastic alumni who filled every seat in the dining room, and presenting Dr. Kenneth Lynch who gave the annual report for the Medical College.

A telegram of greeting being sent to Dean Robert Wilson who was unable to attend the Alumni Luncheon due to a minor illness.

Dr. J. E. Boone, new president of the Alumni Association, accusing Dr. J. D. Harrison of being late as usual.

Dr. William Fewell welcoming the guests into the dining room at the banquet Wednesday evening.

Capt. O. B. Mayer arriving from Fort Jackson with several of his colleagues.

Dr. Hugh Smith collecting the money for the Alumni Luncheon and ending up with three dollars to the good. *Mirabile dictu.*

The Southeastern and Liberty Life Insurance Companies deserving a huge vote of thanks for the delightful buffet dinner given to the Association Wednesday evening.

Certain physicians showing the "morning after" appearance Thursday morning.

Many commenting upon the fine photography exhibited in the movie reel prepared by Drs. Coleman and Sestrunk.

The members of the Auxiliary proving that physicians may be no Beau Brummels themselves but that they are masters in the art of selecting charming wives.

Col. W. H. Moncrief, who held a key position in the U. S. Medical Corps during the first World War, chatting with his friend Dr. J. E. Paullin of Atlanta after the latter had presented a comprehensive, serious, and not so optimistic discussion of national affairs.

Many agreeing with Dr. Paullin when he stated categorically that we would not be long in getting into this war.

Many regretting that Dr. Frank Graham could not have been the second speaker at the banquet as planned, but realizing that President Roosevelt had first call on his services now since he has been made a member of the special Mediation Board.

The excellent and efficient method used in the handling of the lantern slides and moving pictures.

The officers of the Association telling each other good-bye, all happy but tired.

The splendid publicity given to the meeting by the Greenville newspapers.

The following editorial in the evening paper:

WELCOME DOCTORS

(The Greenville Piedmont)

Greenville is pleased to be host this week to the annual convention of the South Carolina Medical Association and its Auxiliary.

No group of citizens works more conscientiously or more tirelessly for the public good than that composed of the physicians and those who assist them in their profession.

Greenville is glad to have this gathering of men and women who have devoted their talents and their lives to the safeguarding and rehabilitation of human beings.

And the hope is that each and every one will have a most pleasant and profitable stay in the city.

The following members of the Association have been called to active service (as of March 20):

ALVERSON, Reginald C., 1st Lieut., Greer, Fort Bragg, N. C.

ANDERSON, Charles W., 1st Lieut., Clinton, Camp Polk, La.

ASSEY, Philip E., 1st Lieut., Georgetown, Fort Bragg, N. C.

BOOKER, John P., 1st Lieut., Walhalla, Fort Bragg, N. C.

BROWN, Alton G., 1st Lieut., Rock Hill, Fort Bragg, N. C.

BRUNSON, Joseph W., 1st Lieut., Camden, Fort Benning, Ga.

BURN, Edward M., 1st Lieut., Charleston, Fort Jackson, S. C.

DAWSON, George R. Captain, Charleston, Fort Bragg, N. C.

FULENWIDER, John O., Jr., 1st Lieut., Pageland, Fort Bragg, N. C.

HALL, Henry F., Jr., 1st Lieut., Wagener, Fort Bragg, N. C.

LARISY, Carr T., 1st Lieut., Varnville, Fort Bragg, N. C.

ROGERS, Wilbert K., 1st Lieut., Loris, Fort Bragg, N. C.

ROSS, Sam H., Jr., 1st Lieut., Seneca, Fort McClellan, Ala.

SOX, Carl C., 1st Lieut., Columbia, Camp Grant, Ill.

MOOREHEAD, William H., 1st Lieut., Goldville, Camp Blanding, Fla.

TAKACY, Theodore L., 1st Lieut., Slater, Fort Benning, Ga.

WATSON, Walter H., 1st Lieut., Charleston, Camp Polk, La.

ORDERS REVOKED

BOOKER, John P., 1st Lieut., Walhalla.

BROWN, Ralph E., 1st Lieut., Barnwell.

DAWSON, George R., Captain, Charleston.

TAKACY, Theodore L., 1st Lieut., Slater.

(Note: It is difficult to keep an up-to-date list of physicians going into military service. If any reader knows of names which should be added to this list, kindly notify the editor immediately, giving rank and station.)

The annual report of the Medical College of the State of South Carolina for 1940 has been sent out. The report shows that there were 326 students enrolled for the current session—173 in the School of Medicine, 17 in the School of Pharmacy, and 136 in the School of Nursing. There were 479 applicants for admission into the freshman class. Of the 108 applicants from South Carolina, 44 were admitted (the capacity of the class). 82% of the

matriculants held academic degrees. It is noted that the increased size of the college entails increased cost of operation.

The School of Pharmacy is now fully accredited and admitted to membership in the Association of American Schools of Pharmacy.

The report lists 43 scientific articles by members of the faculty which were published in various medical journals during the year.

UROLOGICAL GROUP HAS ANNUAL MEETING

Columbia—(AP): Dr. S. E. Wheeler of Columbia was elected president of South Carolina Urological association at a business session of the annual meeting at Hotel Columbia. He succeeds Dr. R. B. Gantt of Charleston.

Other officers elected were Dr. M. Nachman of Greenville, to succeed Dr. Wheeler as vice president, and Dr. J. E. Boone of Columbia, to succeed Dr. Keitt Smith of Greenville as secretary.

At the afternoon scientific session, papers were read by Dr. K. B. McInnes of Charleston, on progress of venereal disease in the last year and Dr. Orion T. Finklea of Florence, on traumatic rupture of the bladder.

ROPER HOSPITAL TO HAVE NEW CONTAGIOUS WARD

Contract has been let for the construction of a new contagious unit for the Roper Hospital. The cost will be over \$70,000. Funds for the purpose were a gift of the late Victor Morawetz.

On March 25th, trustees of the Duke Endowment appropriated \$1,023,346 for assistance to 122 hospitals and 42 orphan homes in the Carolinas. South Carolina obtained aid for 40 hospitals located in all parts of the state. 16 orphanages in South Carolina received extensive aid.

The recent Hospital Number of the Journal of the American Medical Association reports that there are in South Carolina, 49 general hospitals, 3 hospitals for nervous and mental diseases, 6 hospitals for tuberculosis, 1 hospital for eye, ear, nose & throat diseases, 2 orthopedic hospitals and 1 hospital for convalescents—a total of 62 hospitals, with a capacity of 10,625 beds and 428 bassinets. The total number of patients admitted was 101,207 and there were 8,283 births.

NEWS ITEM

Dr. R. Golding Blackburn, sixty-two years of age, died at Marion on April 10. He was a native of Germanton, N. C., but had been practicing medicine in Marion for more than twenty years.

Dr. Blackburn represented Marion in the house of representatives for two terms, 1925 to 1926 and

1935 to 1936.

He was a graduate of the Medical College of the State of South Carolina, class of 1910.

He had been in ill health for about a year and underwent an operation two months ago, from which he never fully recovered.

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MORGANTON, N. C.

A private Hospital for the treatment of Nervous
and Mental Diseases, Inebriety and Drug
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JAMES W. VERNON, M.D., Supt. and Resident Physician.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

February 14, 1941

Case of Dr. W. A. Smith

ABSTRACT NO. 434 (73067)

Student C. C. Smith (presenting):

History: This 73 year old white man was admitted on 9-30-40 with chief complaint of "cramps in stomach coming on at night with dull feeling." Patient had been in good health up until Jan., 1940 when he was in hospital with broken rib. Had fever from 99-100° for 10 days during this time. Veins on abdomen were more prominent than normal and an indefinite mass was felt in the left lower quadrant. Upon his return home he noted that he was growing progressively weaker and increasingly constipated. Was in hospital again from Jan. 24 to Feb. 2 with "low" fever. Returned to work on Feb. 9. During the next 6 months he steadily lost weight, from 125 lbs. to 105 lbs. At intervals and particularly after meals he had a sensation of extreme fullness in his stomach as well as a dull, aching pain which seemed to girdle the body about halfway between the umbilicus and the pubis. Pain had no particular time relationship and sometimes continued to ache all night. No nausea, vomiting or melena. In August, 1940 a mass was noted at umbilicus and veins on abdomen much more distinct. Great exhaustion and loss of weight.

Has had some dyspnea on exertion for the past 2 years which disappeared after resting for about 5 min. Marked generalized arteriosclerosis noted on all admissions.

Physical: T—98° P—100 R—20 BP 188/110.

Revealed an emaciated white man who appeared weak, but not acutely ill. Skin warm and dry and mucosa normal in appearance. Peripheral veins very prominent, especially those of arms and abdominal wall. Vision equal and good with glasses. Ears and nose negative. Tongue very red and atrophic. Teeth missing. Throat neg. Cervical and axillary glands enlarged. Trachea in midline. No tug. Chest asthenic with old fracture of left 10th rib. Expansion equal; tactile fremitus normal. Percussion note resonant and breath sounds of good quality. No rales. Heart slightly enlarged to the left. Rate and rhythm regular; no murmurs. Radial and brachial arteries of good tension but sclerotic. Abdomen somewhat distended. Loops of intestine palpable and borborygmus audible and peristalsis palpable, suggestive of obstruction. No enlargement of liver, spleen or kidneys. No shifting dullness. Some generalized tenderness. In the peri-umbilical region there were two distinct masses about the size of walnuts which were firmly

affixed to the abdominal wall and of fibrous consistency. No caput medusae. Reflexes physiological. No peripheral edema.

Laboratory: Urinalysis, 10-7-41—Negative.

Blood 10-7-40.

Hb. 11 gmc. (73%).

WBC 6850.

Polys. 70%.

Wassermann and Kline—Negative.

Feces negative for blood on 10-15-40.

X-ray examination of colon, Oct. 12, 1940—

Barium was given by mouth and a radiograph made 6 hrs. later showed all of this barium in the ascending and transverse portions of the colon. Fluoroscopy 40 hrs. later showed no barium in the colon.

Course: Patient continued to complain of abdominal pain. On 10-21-40 he passed a moderate quantity of blood by rectum. On 11-14 definite flatness noted in flanks. On 12-28-40 progress note states: "Losing ground. Looks thinner and weaker. There is edema of right leg and penis. Complaints of more abdominal pain." Temp. rose to 104° on 1-16-41 and remained elevated until patient's death on 1-17-41 at 7:05 P. M.

Doctor Smith (Conducting): Mr. Martin will you open the discussion and mention the diagnostic possibilities that you have considered?

Student Martin: A man of this age having symptoms over a period of two years consisting of loss of weight, anorexia, constipation, exhaustion, and vague abdominal fullness and pain suggests that he is suffering from carcinoma of the large bowel, probably located in the sigmoid colon. Edema of the lower extremities and penis indicates some obstruction to the return circulation from these parts such as might be caused by pressure on the iliac veins or inferior vena cava by enlarged lymph nodes that had been involved by metastatic carcinoma. It would be interesting to know whether the para-umbilical masses were really in the abdominal wall, within the abdominal cavity, or attached to the skin. The hyperplastic form of intestinal tuberculosis is also a possibility, but a patient of this age should have had some focus in the lung. Tuberculosis can certainly cause enlargement and matting of the abdominal and mesenteric lymph nodes which might also obstruct the venous return.

Doctor Smith: Mr. May what other diagnoses have you considered?

Student May: I have thought about carcinoma of the stomach and chronic diverticulitis, but the latter would certainly not explain all the findings in the case.

Doctor Smith: Mr. Switzer, do you have any other suggestions?

Student Switzer: I agree with the suggestions that have been made, but I think that lymphosarcoma and Hodgkin's disease are other possibilities to be borne in mind. The absence of splenomegaly and the age of the patient are against the latter as is the lack of definite generalized lymphadenopathy.

In considering malignancy of the large bowel, I think a rectal examination would be of value.

Doctor Smith: A rectal was done and nothing unusual was found. If there was a carcinoma of the large bowel to what regions would it metastasize?

Student Switzer: Local infiltration with extension to the regional lymph nodes would be the initial sites of involvement.

Doctor Smith: Mr. Fouché, do you think the palpable mass in the left lower quadrant is a good reason to suspect malignancy of the colon?

Student Fouché: Yes, I do, particularly when coupled with a history of alternate bouts of diarrhea and constipation.

Doctor Smith: What do you think was the cause for the apparent fluctuant quality of the mass?

Student Fouché: Secondary infection of a polypoid necrotic carcinoma or even rupture of the colon with localized abscess formation would account for it. It seems unlikely that the latter occurred however, because there was little evidence of toxemia, I would also just like to mention actinomycosis of the intestine, although there are several findings that cannot be explained by this diagnosis and the marked toxemia and high fever characteristic of this disease were lacking.

Doctor Smith: Mr. Haynesworth, do you have anything to add?

Student Haynesworth: As regards the hyperplastic form of intestinal tuberculosis, I was under the impression that it was very rare. I am inclined to favor carcinoma of the rectum since he passed some bright red blood in his stools, which would not have had this appearance if it had originated higher up in the enteric tract. Of course the attack of melena might indicate a transitory intussusception of a polypoid carcinoma in the upper portion of the colon.

Doctor Smith: Mr. Martin, of what do you think he died?

Student Martin: The rise in temperature is the only terminal change we have recorded, but if he had concomitant acceleration of his pulse and respiration, I would suspect that he had a terminal lobular pneumonia.

Doctor Smith: Are there any other comments from students or faculty?

Student Cromer: For the sake of the record I would like to mention two other diagnoses. He obviously had hypertension and the slick red tongue is probably indicative of vitamin deficiency.

Student O'Cain: I think one argument against

actinomycosis is that the para-umbilical mass should be a manifestation of whatever disease he had, and I do not believe that actinomycosis would have produced a hard mass. Break-down with suppuration and the formation of sinus tracts and abscesses is the usual course. Then too he should have had much more pronounced toxic symptoms.

Doctor Kelley: I am a little fearful of the diagnosis of carcinoma of the colon in the ordinary sense of the usual annular carcinoma. It is true that the patient had blood in his stools, but this is usually persistent, and such was not true in this instance. He had severe compression of the colon, but not from the ordinary annular carcinoma. Furthermore, I do not believe the fluctuant mass has been adequately explained. I cannot see how distention of the colon from an obstructive lesion would give a cystic sensation on palpation. I am of the opinion that there was some mass on the outside pressing in; a malignancy of some neighboring organ with pressure on the colon. Malignant degeneration of a diverticulum is one possibility.

Doctor Pratt-Thomas: (Demonstrating gross organs). The fluctuant mass was due to a large solitary cyst of the lower pole of the left kidney which measured 10 cm. in diameter. This, of course, was not the chief disease that this man had, the primary pathology being an adenocarcinoma of the body and tail of the pancreas. At necropsy prominent veins were noted over the abdominal and lateral thoracic walls. The organs in the left upper quadrant, namely the body and tail of the pancreas, the spleen, suprarenal, splenic flexure of the colon and greater curvature of the stomach, were bound together by adhesions with much matting of the lymph nodes and omentum. The body and tail of the pancreas were found to consist of hard, crisp, glistening, greyish-white tissue, but the head was entirely free. The neoplastic tissue had infiltrated the entire thickness of the wall of the splenic flexure of the colon, which may account for the bleeding although another basis for the hemorrhage is also present. There are collections of dilated veins in the walls of the intestine which varicosities represent an attempt at collateral circulation due to blockage of portions of the portal system. The splenic vein was almost completely obstructed by the dense pancreatic tumor tissue which it transversed in its course and the portal vein was also somewhat compressed by tumor tissue. Dilated vessels were conspicuous about the stomach, gallbladder and duodenum. The peritoneum overlying the upper portion of the inferior vena cava was infiltrated by dense tumor tissue which formed tight bands across the anterior aspect of the vein and thus compressed it. The inferior vena cava and iliac veins were filled with friable brownish red bloodclot which was attached to their walls and which microscopically showed early organization.

The para-umbilical mass represented a metastatic tumor nodule. There was no involvement of the

skin and the tumor cells may have been directly seeded on the peritoneum of this region or passed along the obliterated umbilical vein from the liver or along an adhesive band.

There were metastases to the lungs and liver and a full blown lobular pneumonia.

Doctor Cox: (Demonstrating slides by microprojection). We are accustomed to think of carcinoma of the pancreas as existing in the head and this case is certainly out of the ordinary in that the neoplasm definitely arose from the body or tail. Clinically there was certainly nothing that one could definitely use as a stepping stone to the correct diagnosis. As you see the pancreatic tumor consists of malignant anaplastic epithelial cells that tend to be columnar, lying in a dense fibrous stroma and which are attempting to form glands and ducts. Fairly normal appearing islets are seen scattered throughout. Some portions of the tumor mimic stratified squamous epithelium and the metastatic nodule in the umbilicus shows this feature quite conspicuously.

Kidney cysts of the type present in this case are thought to be on a congenital or inflammatory basis, but I am inclined to believe that they are usually acquired and are associated with vascular changes, inflammation, or tumor degeneration. They are definitely capable of producing symptoms, but I do

not believe any were produced in this case. They have been produced experimentally by blockage of the tubules together with impairment of the blood supply.

Doctor Smith: I know of no way to definitely diagnose this case even yet, but there are some interesting academic points concerned. In cases of carcinoma of the head of the pancreas you have blockage of the bile passages which supplies a definite lead as to the site of pathology, but with a tumor in this location you are not given a clue. Of course, it is really chiefly of academic import that a diagnosis be made in this sort of case at all, because we have no effective therapy for pancreatic carcinoma. It seems that the kidney cyst was just put in to make it hard. I would like to know if Doctor Kelley knows of any way to make an early diagnosis in such a case.

Doctor Kelley: I would not only like to know how to make an early, but also a late diagnosis in this type of case. Blood amylase determinations might be of some aid, but the pancreas is twice sufficient and it would be hard to evaluate before most of the pancreatic substance was completely destroyed.

Doctor Eleanor Townsend: I had the opportunity of seeing a practically identical case recently and there was no disturbance in the sugar metabolism or chemistry of the blood.

BOOK REVIEWS

MANUAL OF CLINICAL CHEMISTRY, by Miriam Reiner, M.Sc., Interscience Publishers, Inc., 215 4th Ave., New York, N. Y. \$3.00.

This book is a concise accurate description of technical methods used in clinical chemical examinations of blood, urine, cerebro-spinal fluid, feces, toxicological tests, gastric analysis, functional tests of kidney, and liver, also methods for determination of sex hormones, vitamins, together with some other miscellaneous tests. Most of the methods described are capable of being made in moderately well equipped laboratories.

This book should prove very useful and valuable as a laboratory manual for all those interested in making clinical chemical laboratory examinations, on account of its giving adequately so much technical detail in such a condensed manner.

F. B. J.

Macleod, J. J. R. PHYSIOLOGY IN MODERN MEDICINE, ed. by Philip Bard. 9th ed. St. Louis, C. V. Mosby Co., 1941. \$10.00 xxvi, 1256 p. illus.

The 9th edition, as all the previous editions, is of composite authorship. That was a cardinal principle of that lucid thinker and great physiologist Dr. Macleod—but in this latest edition very little that actually came from his pen can be detected, or, at any rate, so disguised in the re-writing by other authors that the genius and personality of its great progenitor is quite lost.

It is like the old jack-knife, the handle of which was renewed twice and the blade—five times.

There is immense gain in composite authorship, but there is a double loss sustained especially in a textbook for undergraduate students.

First—Each contributor, an expert in his chosen

field, writes more voluminously and in more detail than a medical student can digest, and so the textbook becomes too bulky.

Secondly—The pleasing continuity of a master pen, such as Dr. Macleod's was is missing.

However, Dr. Macleod was the first in this country to embody in his textbook clinical applications and these have been extended.

The greenish tint of the paper is most acceptable to the reader's eyes. The extensive bibliography is very useful.

AN INTRODUCTION TO DERMATOLOGY by Richard L. Sutton, M. D., Sc.D., LL.D. F.R.S. (Edin.) Emeritus Professor of Dermatology, University of Kansas School of Medicine, and Richard L. Sutton, Jr. A.M., M. D., L.R.C.P. (Edin.) Assistant Professor of Dermatology, University of Kansas, School of Medicine. With 723 Illustrations 4th Ed. St. Louis, C. V. Mosby Company, 1941.

A problem for the physician, who does not specialize in skin diseases, but must necessarily treat many of them in the course of his practice, is to find a textbook which is not too voluminous but is yet comprehensive enough to be of value. This book, among several others, is an answer.

It contains the necessary and relevant treatment for all of the common dermatoses without the confusion of many alternative trial methods which clutter up the large encyclopedic texts. The book is well written, succinct, well illustrated and well indexed and is authoritative.

A new and different approach to the common problem of acne is a contribution of Dr. Sutton, Jr., and opens up an interesting therapeutic method.

This book is well worth its modest cost and should find a useful place on every doctor's bookshelf.

WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

STATE AUXILIARY ANNUAL CONVENTION

The wives of physicians of Greenville and Greenville County acted as official hostesses to a large number of visitors who came to Greenville April 15, 16, 17, for the meeting of the South Carolina Medical Association and its Auxiliary. They planned a number of delightful social affairs which were enjoyed by all. One of the most delightful affairs took place at the home of Mrs. R. M. Pollitzer on Hillcrest Drive, when the local state officers entertained all the state officers and special guests at a buffet supper. This supper was followed by a board meeting at the Poinsett Hotel. Mrs. H. L. Timmons, President of the organization, presided.

Wednesday morning at eight o'clock local druggists entertained at breakfast at the Poinsett Hotel for local doctors' wives and visiting doctors' wives. The hosts were assisted by members of the local auxiliary to the South Carolina Pharmaceutical Association.

Wednesday morning at nine-thirty the House of Delegates of the Auxiliary held its business session. Mrs. R. M. Pollitzer of Greenville was installed as State President, succeeding Mrs. H. L. Timmons of Columbia. Mrs. P. M. Temples of Spartanburg was named President-Elect. Other new officers include Mrs. J. W. Kitchens of Liberty, First Vice-President, Mrs. J. E. Orr of Seneca, Second Vice-President, Mrs. David Adcock of Columbia, Recording Secretary, Mrs. L. H. McCalla of Greenville, Corresponding Secretary, Mrs. J. L. Sanders of Greenville, Treasurer, Mrs. W. H. Lyday of Greenville, Publicity Secretary.

Each year the State Auxiliary presents a bed to one of the hospitals in South Carolina but this is the first time that one has been given a local hospital. This bed will be placed in the General Hospital of Greenville in the name of Jane Todd Crawford. Each patient who occupies the bed will be presented a book-

let giving the history of this courageous woman who contributed so much to the field of surgery.

At eleven thirty the program meeting was called to order by Mrs. H. L. Timmons, the President. Invocation by Mr. H. C. Ritter, Pastor of St. Paul's Methodist Church, song, "God Bless America" was led by DuPre Rhame. The Club Woman's Creed by Mrs. M. Nachman, local President. The address of welcome was made by Mrs. H. J. Crooks, President, and Mrs. Leo F. Hall of Columbia responded. Greetings by Mayor C. Fred McCullough and Dr. C. C. Ariail, President of Greenville County Medical Society. Dr. W. L. Pressly of Due West presented Dr. Frank Lahey of Boston, Mass. who gave a most interesting talk. Delightful music by Mr. DuPre Rhame and Mrs. Esther Cass accompanied by Mrs. DuPre Rhame was then enjoyed. After the awarding of trophies a very impressive "In Memoriam" was conducted by Mrs. C. P. Corn assisted by Mrs. W. P. Barton who sang, "There Is No Death." She was accompanied by Mrs. John J. Young. After the presentation of the gavel and installation of officers the meeting adjourned.

Luncheon was served at the Greenville County Club at one-thirty, with wives of Greenville County doctors as hostesses. This meal was in the form of a delightful buffet luncheon and over three hundred guests were served.

From three until five o'clock the visitors were carried on a Garden Tour, being shown some of the city's largest and loveliest beauty spots. An informal tea was held at the attractive home of Dr. and Mrs. Willard Hearin on Hillcrest Drive.

At seven o'clock a very elaborate dinner was served to the physicians and their wives at the Poinsett Hotel. Mr. Frank Hipp of Greenville was host on this outstanding occasion and over 500 guests were entertained. This was followed by the President's Ball.

Thursday morning through the courtesy of Cabiness Gardner a fashion show was arranged for the visitors at this beautiful new store.

As a whole, the Auxiliary feels that the Convention was a success and each member feels that it has been a great privilege to do her part to make it so.

Submitted by Mrs. J. L. Sanders,
Publicity Chairman Woman's
Auxiliary to S. C. Medical Association

OCONEE COUNTY MEDICAL AUXILIARY

The Oconee County Medical Auxiliary met Monday afternoon, March 10, with Mrs. R. F. Zeigler at Seneca. Mrs. S. H. Ross, the President, presided.

During the business session plans were discussed for the observance of Doctor's Day, March 31. The handsome floor lamp purchased by the Auxiliary in honor of the late Dr. E. A. Hines to be placed in the medical library at the Oconee County Hospital had arrived and was shown to those present. On the base of the lamp is a bronze plate bearing the following inscription: "Presented in Memory of Dr. E. A. Hines, Sr., by the Woman's Auxiliary

to the Oconee County Medical Society." Election of officers for the ensuing year resulted as follows: Mrs. B. F. Sloan, President, Walhalla; Mrs. J. T. Davis, Vice President, Walhalla; Mrs. J. N. Webb, Secretary-Treasurer, Seneca.

Master Cherry Stribling contributed an attractive part to the program by reciting his speech to be delivered in the County oratorical contest entitled "Smoke Blues." Miss Leola Hines read an interesting paper on "Animal Experimentation in Regard to Disease."

The hostess assisted by Miss Jean Cochran served delicious refreshments carrying out the St. Patrick's motif in the decorations.

COLUMBIA MEDICAL AUXILIARY ELECTS OFFICERS

Mrs. A. T. Moore was recently elected president of the Columbia Medical Auxiliary at the meeting Tuesday, March 4 at the home of Mrs. Jean LaBorde. Mrs. Leo Hall, vice-president, presided in the absence of Mrs. O. B. Mayer, retiring president. Mrs. R. B. McNulty was elected vice president, Mrs. K. D. Shealy, secretary, and Mrs. Malcolm Mostello, treasurer.

Miss Winifred Zwemer, executive secretary of the

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*Silver Picrate is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph., Gon. & Ven. Dis.*, 23, 201 (March), 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA

Richland County Mental Hygiene Society and guest speaker, gave an interesting talk on "Child Hygiene" and told of her recent trip to New York, where she attended the Orthopsychiatric Conference.

Mrs. H. L. Timmons, president of the South Carolina Medical Auxiliary, discussed plans for the State Convention to be held in Greenville April 16 and 17 and urged all members to attend.

The following members were elected delegates to the Convention in Greenville: Mrs. A. T. Moore, Mrs. Roger Doughty, Mrs. George Bunch, and Mrs. T. J. Hopkins. Alternates are Mrs. C. G. Spivey, Mrs. James Watson, Mrs. William Fox, and Mrs. Watson Talbert. Mrs. Leo Hall will also attend the Convention and make the reply to the welcome address at the opening meeting.

After the business meeting refreshments were served by the assistant hostesses, who were Mrs. Leo Hall, Mrs. Carl Sweatman, Mrs. S. W. Talbert, Mrs. H. L. Timmons, Mrs. H. W. Tobias, Mrs. C. G. Spivey, Mrs. William Weston, Jr., Mrs. Hugh Wyman, Mrs. Leland Brannon, Mrs. T. D. Dotterer, and Mrs. W. T. Barrow.

Mrs. James T. Green, Publicity Chairman.

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THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

June, 1941

NUMBER 6

Medical Preparedness

J. E. PAULLIN, M. D.,

PROFESSOR OF CLINICAL MEDICINE, EMORY UNIVERSITY
ATLANTA, GA.

Dr. Tyler, Mr. President, ladies of the Woman's Auxiliary, members of the South Carolina Medical Association, ladies, and gentlemen:

I consider it a great privilege and a pleasure to have the honor of appearing before such a distinguished body as is gathered here tonight on this particular occasion. I feel that the honor has been conferred upon me because I happen to be in the corps area, representing it on the National Preparedness Committee of the American Medical Association; and I feel that perhaps the reason, the chief reason, why I should be here is to acquaint you with many of the activities of this committee and, at the same time, to impress upon you the seriousness of the situation in which we find ourselves at the present time.

South Carolina throughout her history has been known as the state that fires the first gun. She stands for those principles upon which democracy has been founded and upon which we are going to live or by which we are going to die. Because of that fact it is necessary, I feel, that we, as physicians, as doctors, as citizens, should understand a part of the problem that lies before us.

We have been accustomed in times past to consider the problem of preparedness from the medical standpoint as one which could be met at some future date. Toward that end

we have dillydallied along, accomplishing something, but nothing like what is going to be demanded of us within the next two or three months. We have failed to appreciate the seriousness of the obligation which rests upon us as professional men and as citizens.

At the last meeting of the American Medical Association, Colonel Dunn, representing the Surgeon General of the Army, appeared before the House of the Delegates of the American Medical Association and requested, on behalf of the Surgeon General of the Army, that the American Medical Association interest itself in helping to mobilize physicians for an eventuality which seemed in the near future. As a result of this appeal from the Surgeon General of the armed forces, the American Medical Association organized a committee on medical preparedness. That committee consists of one representative from each corps area and the chairman, who was named as Dr. Irvin Abell of Louisville, Ky. With that committee were, ex officio, the officers of the Association, the President, the Chairman of the Board of Trustees and the Secretary of the Board of Trustees, Dr. Fishbein, the Editor of the Journal, and Dr. West, the Secretary of the Association.

As soon as that committee was formed it immediately attempted to organize the profession for any eventuality which might be near at hand. As a result there were appointed local chairmen for each state in the Union.

Delivered April 16, 1941, at the annual banquet of the South Carolina Medical Association, Greenville, S. C.

Dr. Edgar A. Hines, of Seneca, S. C., was named chairman for your state, and at this point may I pause to pay tribute to that grand and glorious man. Dr. Hines was a member of the House of Delegates from your state of South Carolina, the secretary of your State Association, the chairman of this preparedness committee for your state. There never lived in the State of South Carolina a man whose interest was greater in the organization of his profession; there has not been a man who loved his profession more than Dr. Hines. A wonderful tribute to a wonderful person was given when this responsibility was placed on his shoulders, and all of us grieved with you at his passing.

We are fortunate in having someone trained with Dr. Hines to assume the burden of work which naturally fell to the State Chairman. And at this point I should like to pay tribute to your President, Dr. Pressly, for the magnificent way in which he and all of your local committeemen in this state have cooperated with the Medical Preparedness Committee of the American Medical Association in furthering the purposes for which this committee was founded. That is due to the work which he has carried on since the passing of Dr. Hines.

There have been quite a number of meetings of this committee. The purpose of the committee was to advise with the Army, the Navy, and the Public Health Service in an advisory capacity toward the betterment of the military, naval, and public-health service. That has required a tremendous amount of work. The objects that the committee attempted to accomplish were about as follows: First, the organization of the states into military areas for the purpose of getting and compiling information concerning every doctor in the United States, irrespective of whether he is a member of a state medical association or not. That information was accumulated by sending a questionnaire to every licensed physician. They responded nobly to the questionnaire, and in answering that questionnaire each physician told what he is capable of doing and how and where he might be of service in the national emergency. Up to the present

time we have received in response to the questionnaire something like 174,000 blanks returned out of approximately 188,000 that were mailed out.

After this information is accumulated certain duties became quite evident. One was that this committee must of necessity make an effort to control or provide for the civilians a type of medical service during the emergency which would be comparable to what they have at the present time. In other words, if all the doctors were going to be taken into the army and the civilian population left without protection, sickness would increase, and you would have defeated the very purpose which you set out to accomplish. Second, industry must be provided for in that a sufficient number of physicians must be allotted to industry to see that production is constantly maintained. Thirdly, the needs of the Army, the Navy, and the Public Health Service must be kept to a standard. Your Committee on Medical Preparedness has attempted to do some of these particular jobs, perhaps not altogether as successfully as it might, but with a great deal more success than attended our efforts in 1917.

Next, the committee has attempted to act in an advisory capacity to the governors of the various states in suggesting physicians who are acceptable to serve on draft boards for the examination of selectees. That has been a very important office which has been fulfilled in the various states through cooperation with your state chairmen and through district chairmen and through County chairmen of these various preparedness boards. Physicians have given freely of their services without pay in examining each applicant who came before a draft board. Next, this physicians' committee has provided members of advisory boards that are under the control of the State government, and, thirdly, they have provided physicians for induction boards for the United States Army. All of this is extremely important work and has to do with the problem of preparedness.

It has been necessary also to coordinate the work of this National Defense Committee of the American Medical Association in seeing that there is a constant supply of physicians

to come in and take the places of those who have been called into the service. That means a consideration of the problems of medical education; and, in cooperation with the selective service boards over the country, it has been possible, through the Selective Service Act, to defer medical students, and any student who is in a reputable college, through the period ending July 1, 1941. Beyond that point there is no deferment at the present time.* That is a serious problem, for the reason that there are at the present time close to eight or ten thousand students beginning the study of medicine every year. About eight thousand will graduate, and it is necessary for the armed forces each year to have at least five thousand doctors enter the service every year. Of those five thousand doctors, approximately twenty-five hundred or three thousand remain either with the Army or the Navy. That leaves two thousand or twenty-five hundred to go back to civilian life, provided we do not get into the war. In the event we get into the war, which I feel very sure we are going to do, and that in a very short space of time, these figures will mount very greatly.

The constant training of physicians is an absolute necessity, and unless that goes on you can readily see the fix that we would be in in a very short time. There is an announcement by the Surgeon General of the United States Army that all medical students who graduate this June will be accepted for commissions as first lieutenants in the Medical Reserve Corps. They will be allowed to have one year of internship before they are called to duty. The same student, if he so chooses, may join the Navy with the same privilege; that is, he will be allowed to have one year of internship before being called to active duty.

Now, those who are physicians practicing in communities will have to train medical students practicing in communities where you have a rather large charity practice—public charity practice. (All of us have large charity practices; as a matter of fact I might say that we have small paying practices.) But each city hospital has to maintain a public service, and

that service has to do with the training of young men internes for the practice of medicine. If it is no longer possible to obtain internes for the practice in these various hospitals for training and if so many of our physicians have been called into the service, you can readily see how a very serious problem will soon face us. And for those of us who are connected with medical schools and who have students in teaching hospitals the removal from those institutions of individuals who have residencies and assistant residencies offers a still greater problem.

All of those things are problems that concern you as citizens and concern you as practitioners of medicine and that concern the Army, the Navy, and this Government of ours. The Medical Preparedness Committee of the American Medical Association is attempting to assemble data on these problems and furnish accurate information, with a recommendation, to the surgeons general of the various services.

The handling of the selective service is no easy problem. Accurate, painstaking examination, in order to weed out from this next army a lot of the poor, miserable boys who got into the last army and who have been a constant drag on this country of ours since that time, is very important. We are trying to keep those out. The constitutionally inferior, the constitutionally psychopathic individual with an inadequate personality, has no place in this man's war.

That can be well illustrated by a story that was told about a country doctor, a man who had practiced in the country for years. He knew some medicine; he knew more about people; and when he was fifty-four years of age he volunteered his services and he went into the last war as a lieutenant. He went to a base hospital and was put in charge of a ward. He went down to his ward and made his rounds—a man with a human understanding. He went to one boy and said: "Buddy, how are you doing?" The boy said: "Doctor, I am not so well." He said, "Maybe you are bilious." "Yes, sir, I am bilious, Doctor." The doctor went to another, and he was not so well; he had shortness of breath and he could not do much exercise. He went on until he found two

* Since the time of this address, such deferment for medical students has been established—Ed.

or three others, and after he had been on the ward for about four or five weeks he had looked through the Army regulations, turned over the pages of the book, to see what disease these boys had, if he could find it. He knew what it was. He could not find what they had, so he finally discharged these boys, or recommended that they be discharged from the Army, and he diagnosed them as "P. M. S." and sent the slips up to the office. After about six or eight of those slips came in the adjutant in the commanding office got them together and looked at them and saw the diagnosis, "P. M. S." He got his army book, looked all through it, and could not find the diagnosis. Then he went in to his commanding officer and said: "Colonel, a lot of these boys are being discharged with the diagnosis P. M. S., and I can not find it in the Army manual. What on earth are we going to do?" The Colonel said: "Send for the lieutenant." The lieutenant came up and walked in and said: "General, how are you this morning?" The colonel said: "Lieutenant, you have been discharging a lot of these boys with a diagnosis of P. M. S., and we do not understand it. What does that mean? We can not find it in the army medical manual and can not find it in any medical journal. What does it mean?" The lieutenant said, "Well, General, you can look all around and you probably will not be able to find it. I have been practicing medicine for thirty years. There is no description of these boys in any medical book. What I call them, and I have been calling them that for a long time, is Poor, Miserable Sons of guns, and that is what they are."

We are trying to keep those boys out of the Army. They have no place in a fighting machine.

Further than that, other efforts are being made to make this machine that we are attempting to develop an efficient machine, and thereby the work of this preparedness committee is closely integrated with the work of the National Research Council. And that brings up the question of a great group of the best scientific minds that can possibly be assembled, who will study the needs of this country in its preparedness program. In this National

Research Council there is a committee on medicine and various subcommittee which are studying problems that are going to arise — that have arisen and will arise in this national preparedness program. An attempt is going to be made to formulate certain as nearly fool-proof methods of procedure as can be assembled for the care of our boys who are called into service — committees for the study of heart disease, tuberculosis, metabolism, therapeutics, infectious diseases, venereal diseases, tropical diseases, transfusions, blood diseases, various blood substitutes of one kind or another. Those lists may be multiplied from time to time. It is impossible, in the short space of time, to give you anything like a clear idea as to the amount of work and the demands which have been made and are being made on this particular committee. One problem that we have at the present time and about which advice has been given concerns obtaining commissions for men over thirty-five years of age in the Medical Reserve Corps. At the present time it matters not how loyal a man is nor what he wishes to do, if he is over thirty-five years of age he can not get into the Reserve Corps.

In this Fourth Corps Area there are going to be opened by July first at least five thousand general hospital beds. There are men going to be needed to take care of the medical and surgical services in those hospitals. The Medical Reserve Corps, as constituted at the present time, can not possibly take care of those hospitals; it has not sufficient personnel to do so. Approximately fifty per cent of the men in the Medical Reserve Corps are men who have been out of training for from one to three years. The Committee on Medical Preparedness, to insure that your boys get adequate medical care, has insisted that the medical department take in men who are well trained, though they are over thirty-five years of age — though they be forty-five years of age or fifty or fifty-five. The Surgeon General of the Army is powerless to do that; it must be done through the War Department. I believe something will be done in a short space of time.

I am not an alarmist. I have attempted to

look at this medical situation frankly, peacefully, if it can be done. It can not. This country of yours and this country of mine is in the most dangerous situation it has been in since April, 1917, and more so day by day. We can not pass these things off lightly. They demand your care; they demand your attention; they demand your thought; they demand your help. A serious situation is in front of us.

Doctors have always given of themselves freely, fully, without expectation of reward. They will do it again, better and more than ever, because they are first of all one-hundred-percent Americans and first of all one-hundred-percent physicians and believe in that good old Hippocratic doctrine of unselfishness, love for country, and the protection of democracy.

The Use of Powdered Sulfanilamide in the Peritoneum

(Report of 45 cases)

C. A. KINNEY, M. D., FLORENCE, S. C.

(From the Surgical Service of The McLeod Infirmary,
Florence, S. C.)

Since the introduction of sulfanilamide and its derivatives into the practice of medicine, the question has repeatedly risen, "What effect would it produce when injected directly into the peritoneal cavity?" Most of the men doing surgery, whether major or minor, have at some time or another, employed it locally and in the vast majority of cases, the result has been most encouraging. King¹ presents an illuminating report about the care, management and the use of sulfanilamide locally in war injuries. However, its use in the peritoneal cavity has been very limited, due mainly to several factors; the effect and complications it might produce, the question of its absorbability from the peritoneal membrane and also the complications which might rise from experimenting with an untried procedure. Key & Frankel² have recently reported an experimental study in dogs and have concluded that drugs of the sulfanamide group are well tolerated in solution by the joints, pleura and peritoneum. In April of this year, Thompson, Brabson and Walker³ present a summary of results obtained from the intra-peritoneal use of sulfanilamide in ruptured appendicitis.

This is a report of 45 cases in which sulfanilamide was used in the peritoneal cavity as compiled from the records of the surgical service of The McLeod Infirmary. In all of

these cases, we feel that each patient was greatly benefitted by its use, and in some instances the convalescence was nothing less than miraculous.

The drug used in these cases was the finely granular powder of sulfanilamide. It was weighed in quantities of five and ten grams and placed in test tubes, the test tube being found to be the easiest way of handling the drug, and then was stoppered with cotton.

The problem arose as to the best method of sterilizing the powder. At first it was thought that auto-claving would suffice, but this procedure was found to produce too much moisture and when dried the drug would become rock-like and hard in the container. Next it was sterilized in a dry oven at 120 degrees centigrade for a period of thirty minutes and this did not in the least alter its crystalline powdery form and appears to be the easiest, safest and surest way of sterilizing it.

In the cases of generalized peritonitis encountered, we used ten grams of the drug for the average adult of 150 pounds. Age and weight are factors which modify dosage and in one child, four years of age, with ruptured appendicitis, we used one-quarter of the adult dose with complete recovery and we feel that in computing the dosage for a child that one-quarter to one-half of the adult dose will be satisfactory.

The drug was poured directly from the sterile test tube into the abdomen and it was spread as widely over the viscera and peritoneum as was possible. After the peritoneum was closed a small amount of the original ten grams which was left in the test tube was sprinkled in the tissues of the abdominal wall. In all but four cases, the wounds were closed without drainage, but in these four cases we employed a simple rubber tissue drain or a Penrose drain. It was noted that those cases closed without drainage recovered quicker, had a higher sulfanilamide blood level and generally ran a much less stormy course than did those closed with drainage.

Post-operative sulfanilamide blood levels were determined at frequent intervals and it was found that in those cases in which drainage was used there was a lower blood concentration than in those cases in which drainage was not used. The average peak obtained was six to seven milligrams per one hundred cubic centimeters of blood where drainage was not used and five to six milligrams per hundred cubic-centimeters of blood when it was used. The point of maximum concentration was reached twelve hours after operation and from this time there was a gradual but fairly rapid fall in the sulfanilamide blood level until it had all disappeared from the blood by the end of the eighth day. These figures were compiled by using eight grams of sulfanilamide in the peritoneal cavity and two grams in the tissues of the abdominal wall.

In one case of gun shot wound of the abdomen with extensive peritonitis there was such a virulent infection present that sixteen grams were used in the peritoneal cavity and four grams in the tissues of the abdominal wall. Twelve hours after operation the sulfanilamide blood level was twelve milligrams per one hundred cubic centimeters of blood. Just how long this took to reach normal we are unable to say as he developed a post-operative pneumonia and had to be supplemented with sulfathiazole for two days.

The figures compiled from our series of cases as to absorption from the peritoneal membrane compare favorably with those found in other clinics. Dees⁴ found that sulfanil-

amide applied in the peritoneal cavity in doses of twenty grams will give a blood concentration of nineteen and five tenths per cent. Another series⁵ showed that after the intraperitoneal application of fifteen grams of sulfanilamide, blood concentrations as high as twelve and five tenths were found. The statistics as compiled by Thompson, Brabson & Walker of the Roosevelt Hospital Surgical Service³ show the average peak to be six and nine tenths milligrams per one hundred cubic centimeters of blood and the average time at which this point of maximum concentration was reached was fourteen and seven tenths hours after operation. In all of these reports there was a gradual but steady fall after the first twenty-four hours until all traces of sulfanilamide had disappeared from the blood between the eight and ninth day.

The post-operative period of our cases was fairly consistent. In all of these there was the absence of the extremely high fever usually encountered with the average case of generalized peritonitis and the temperature usually reached normal between the third and the sixth day following operation. The abdomen remained soft and in only seven cases was it necessary to institute duodenal drainage. Those cases closed without drainage had an easier convalescence than those closed with drainage, apparently due to the fact that much sulfanilamide was lost by way of the drainage tube. In only one case was it found necessary to supplement the absorption of sulfanilamide from the peritoneal cavity with sulfanilamide by mouth, this being a case in which a post-operative pneumonia developed and the patient was treated with chemotherapy until the pulmonary symptoms had cleared completely. In all of the other cases, the one dose of sulfanilamide injected intraperitoneally was the only dose of the drug given. The tissues of the abdominal wall showed a tendency to heal much more rapidly than when it was not used, and it apparently promoted healing of the wound, although there were ten cases in our series in which there was some separation of the wound edges and some drainage, the drainage being more of a seropurulent type than purulent. Some writers have thought

DIAGNOSIS	CASES	DEATHS	MORTALITY
1—Ruptured appendicitis	18	1*	5.5
2—Intestinal perforations (gunshot wound)	2	0	0
3—Intestinal perforation foreign body (fish bone)	1	0	0
4—Ruptured diverticulum	1	0	0
5—Gangrene of small intestine with resection of 2 to 6 feet	4	0	0
6—Tubo-ovarian abscesses with free pus	19	0	0
	—	—	—
	45	1	2.2

that the presence of sulfanilamide prevented normal healing of healthy tissue but such has not been our experience. This may be accounted for by our using relatively small amounts of the drug.

In this series of cases there were no severe toxic symptoms or complications. In some cases there was nausea and vomiting, but it could not be distinguished from that due to the peritonitis. Those patients in which a total of over 10 grams of sulfanilamide was used, showed an noticeable cyanosis, but this disappeared in two or three days time. Persistent elevation of temperature occurred in two or three cases and it was our impression that this might have been directly due to the sulfanilamide. We have encountered no cases of leucopenia, agranulocytosis, hepatatis or jaundice. One patient had a cerebral embolism, but we do not believe that the intraperitoneal use of sulfanilamide or the closure of the wound without drainage had any part to play in this case. We are prone to look upon this case as a surgical complication which might arise at any time with a subject as poor a surgical risk as this patient was.

*The one case that died was an elderly, 65 years old white woman with a blood pressure of 240/140 who shortly after operation had a cerebral embolism with death ensuing about fifty-six hours after operation.

Conclusion

In a series of forty-five cases of generalized peritonitis treated at The McLeod Infirmary, sulfanilamide powder was used in all the cases with only one death resulting and this death was due to a cerebral embolism which developed shortly after operation. In some of these cases we felt that the picture presented was hopeless, and we were amazed at the results obtained. Complications were encountered less frequently than in former years and no severe toxic effects were noted.

We wish to wholeheartedly endorse the use of sulfanilamide in the peritoneal cavity in all cases of frank or suspected generalized peritonitis.

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The National Physicians Committee for the Extension of Medical Service

WILLIAM WESTON JR., M.D., COLUMBIA, S. C.

(Presented at Annual Session of South Carolina Medical Association, Greenville, April 16, 1941)

The National Physicians Committee was officially organized November 18, 1939. The following officers were elected: Dr. Edward H. Cary, Dallas, Texas, Chairman, Dr. Austin A. Hayden, Chicago, Secretary, and Dr. N. S. Davis, III., Chicago, Treasurer.

There was formed a central committee of more than 800 physicians throughout the various states of the union. Some of these include Doctors Howard Morrow, San Francisco, Charles W. Mayo, Rochester, Minn., Herman L. Kretschmer, Chicago and Charles Gordon Heyd and Haven Emerson, New York.

It is an independent organization, that is, it is separated from the American Medical Association. It is supported financially by individual subscriptions mostly from physicians but also from allied sources such as dentists, nurses, hospitals, pharmacists and lay groups interested in the maintenance of the private practice of medicine. Contributions are voluntary.

All are familiar with the nefarious Wagner National Health Bill S 1620 which was introduced into the Senate February 28, 1939. We doctors throughout the country rose up to defend our rights despite a group of prominent physicians and surgeons who favored socialized medicine.

There are, no doubt, two sides to the argument as there are to every question. Those who favored the bill were either independent financially or had a position which insured them a decent living. A number of this group have had their income greatly curtailed by the low interest return, thereby wishing the government to make up for the deficiency. Even those who had long ago reached maturity on the way to senility may have been absolutely sincere in their belief. But the introduction of the bill did at least precipitate the question among the medical societies all over the

country — Do you believe in Socialized Medicine?

If the answer is in the affirmative, then the Wagner Bill suits.

The regimentation of the doctors will not do away altogether with the private physician because there will be a few physicians who possess sufficient fortitude to continue as independent individuals with the privilege of selling their wares — which with us is the practice of medicine. This does not necessarily mean that the private practitioner is the best physician but it does imply that he has self assurance.

The South Carolina Medical Association through its House of Delegates at their meeting in Spartanburg, April 1939 opposed the bill. The American Medical Association took the same action at its annual meeting in 1939. The bill was defeated in Congress. Last year another Wagner Bill S 3020 was introduced and passed. This was probably a good measure as it provided for the establishing of small hospitals in rural localities which had no hospital facilities.

The reasons for the organization of the National Physicians Committee are stated as follows:

"Medicine is confronted with two new sets of conditions. On the one hand, widespread unemployment, low farm income, and the continuation of conditions of general depression have made it difficult for an ever increasing number of people to pay for the best medical service and proper hospitalization out of earnings.

"On the other hand, there is the trend — worldwide in scope — toward governmental paternalism and the false, suicidal doctrine that the 'state' can provide a service and a security that the people cannot otherwise obtain. As related to medicine, the implement-

ing of this concept would effect revolutionary changes in both the practice of medicine and the underlying philosophy which has given it the dynamic quality that resulted in worldwide leadership.

"If ethical and scientific standards are to be maintained the independence of American Medicine preserved and the public interest best served, American physicians must:

"1. Make possible the providing of medical service to the indigent and to those in the low income groups, and insure the most widespread distribution of the most effective methods and equipment in medicine and surgery.

"2. Assume the responsibility of countering destructive propaganda by familiarizing the public with the facts in connection with the methods and the achievements of American medicine."

Medicine may be divided into 3 parts.

1. Research (Investigator).
2. Science (Teacher and Practitioner).
3. Art.

Diagnosis and treatment is the application of all three.

There are good and bad practitioners and most of use strive to belong to the good. Remove the personal element which exists between doctor and patient and the contact becomes impersonal with resulting lack of confidence. This kind of practice is a trade rather than a profession. Soon it will be the statistical data that is the quantity as opposed to the quality of medicine. Thus far there has been no great lack of doctors and I believe the great majority have done their full share of charity work in caring for the indigent. No doubt there are some of the public who have not received medical assistance when they should have, but this would be true regardless of what system is tried.

This brings up the question of the needy — the poor — the indigent. All doctors see some of this class, some more than others. They have received free medical attention and treatment for generations—the service has usually bettered as the advancement in medicine improved. The year 1933 witnessed the introduction of wide social changes and adjustments — naturally medicine had to be in-

cluded. A great many of the alterations were essential and have resulted in marked advancement, particularly in living conditions. I hold that it is not necessary to destroy all the good in the old to bring about something new.

Should we sacrifice ourselves for the whole benefit of labor? I am now referring to defense industries. The strikes are settled — yes but on what terms — higher wages. If they can call a business or professional man into service they can call a laborer. The tail has wagged the dog long enough. We should let our representatives know just how we stand.

When the presidential campaign was at its height in the autumn of 1940 President Roosevelt made the following remarks:

"Neither the American people nor their government intend to socialize medical practice any more than they plan to socialize industry. In American life the family doctor, the general practitioner, performs a service which we rely upon and trust.

"No one has a greater appreciation than I of the skill and self sacrifice of the medical profession. And there can be no substitute for the personal relationship between doctor and patient which is a characteristic and a source of strength of medical practice in our land."

At an earlier date, September 16, 1940, Mr. Wendell Wilkie said, "There is not one to whom socialized medicine is more repugnant than it is to me. I believe in skill that is developed by the competitive system."

Expressions throughout the country, particularly in the press, have upheld the medical profession, but the priceless gains and advances the profession has made is the responsibility of each member of the profession. Let us not forsake the cause now. Support independent medicine by giving something material and some of your time to its noble efforts.

There are three classes of contributions to The National Physicians Committee:

Class A—Supporting contributions of from \$2.00 to \$7.50.

Class B—Foundation Contributions of from \$12.00 to \$100.00 or more.

Class C—Participants in the 3 cents a Day Club of N. P. C. \$10.95 per year.

It is easy to shift the buck and "let George do it," but what happened to the countries that thought they could take care of the Germans when they came? All save one have fallen and the British alone stand. Gentlemen of the Medical Profession—let us be prepared. Support the N. P. C., even though it might call for some sacrifice, so that our leaders will have available funds to carry on.

The Federal Court in Washington, D. C., on April 4, 1941, declared the American Medical Association a trust. The reason, as I understand it, is that a group of doctors whose standing was questionable were not approved by the local medical societies, and consequently were not permitted to practice in the leading hospitals of Washington. This group of doctors is employed by a group of federal employees. The government employees have practically complete charge of the organization and merely employed the doctors. This is social medicine in the extreme. If it is to be forced on us then we had best let men who understand the intricacies serve as our mediators. At the present time, the Board of Directors of the National Physicians Committee is best prepared to serve us in that capacity.

The platform of the American Medical Association will be found: Jour. A. M. A., Vol. 113, Dec. 2, 1939, page 2060.

We speak of the "Priceless Heritage" of the citizens of the United States. What does it mean to you? To me it is Political Liberty, Social Liberty and Economic Liberty which in turn is Americanism. We have the right to speak, print, invest, vote and last but not least, worship as we please. We are free people who act as individuals and not as slaves as do the peoples in the conquered countries of Europe.

The year 1938 gave the United States "the most favorable health record of its one hundred and fifty years' history," and showed the best health record and the lowest death rate in the world when compared with any other similar numerical group.

Germany under the Hitler regimentation has the following to show.

	1933	1937
Scarlet fever cases -----	78,830	117,544
Diphtheria cases -----	77,340	146,733

Dysentery has increased 300 percent in six years. No doubt the Germans are advocating the survival of the fittest and let the Devil take the hindmost.

There are two kinds of Government:

"1. Governments that are amenable to and that fear the people. These governments are creatures of the people.

"2. Governments which dominate the people and which the people fear. These people are creatures of the government."

The encroachment of the government upon the doctor as a practitioner of medicine will suppress the progress now being made. What we desire to do is to better the health of all men, women and children. There is little doubt but that the doctors will cooperate to the fullest to gain and maintain for our people the status of being the healthiest people on earth. The solution will be worked out I believe for the best interest of all and we will continue to have our individual rights.

The one urgent need to-day is national defense — this is an extreme emergency. Certainly we doctors are ready to do our part. Are the people willing to do theirs? Yes. Are the laborers? They must prove it.

In conclusion I trust you will interest yourselves sufficiently in the N. P. C. to take an active part by joining one of the three groups which has been mentioned.

THE JOURNAL

OF THE

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Office of Publication: (In care of the Editor)
Subscription Price

Florence, S. C.
\$3.00 per Year

JUNE, 1941

THE COUNCIL

What is the function of the Council?

This question has been asked by many members of the Association and it is only right that physicians throughout the state, particularly those who have recently joined the Association, should be given information relative to this important body.

According to the Constitution of the South Carolina Medical Association, (Article VI),

The Council shall consist of the Councilors, and the President and Secretary, *ex-officio*. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates.

The duties of the Council are defined in the By-Laws (Chapter VII) as follows:

The Council shall be the Board of Censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a component society, upon which an appeal is taken from the decision of an individual Councilor. An appeal from the decision of the Council may be taken to the House of Delegates.

The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint an editor and such assistants as it deems necessary. All money received by the Council, or its agents, resulting from the discharge of the duties assigned to them, must be

paid to the Treasurer of the Association, and all orders on the Treasurer for disbursements of money must be approved by the Council. It shall annually audit the accounts of the Treasurer and Secretary and other agents of this Association and present a statement of the same in its annual report to the House of Delegates which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary or of the Treasurer, the Council shall fill the vacancy until the next annual election.

Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work, and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates.

Another task which has come to the Council in recent months has been that of assisting the State Chairman of the Medical Preparedness Committee in securing all possible information relative to physicians in the state. Indications point toward more work for the Council along these lines in the immediate future.

It can be seen that next to the House of Delegates itself, the Council is the most important part of the Association. The Association realized the importance of the position of Councilor when the following men were elected to the present Council:

First District		
F. G. Cain	-----	Charleston
Second District		
R. B. Durham	-----	Columbia
Third District		
J. C. Sease	-----	Little Mountain
Fourth District		
Hugh Smith, Chm.	-----	Greenville
Fifth District		
Roderick McDonald	-----	Rock Hill
Sixth District		
James McLeod	-----	Florence
Seventh District		
E. T. Kelley	-----	Kingstree
Eighth District		
L. P. Thackston	-----	Orangeburg

DEATHS

From The State: Dr. Bruce Mayne of Columbia, international authority on malaria, died during the early hours yesterday morning in the United States Marine hospital, Baltimore, Md. He had been in ill health since December, 1940, but had remained at his station at the South Carolina State hospital until three weeks ago.

Doctor Mayne was a veteran member of the United States Public Health service, having completed more than 28 years in the fields of entomology and malaria investigation. His title was that of special expert and his degrees included B. S., M. S., C. T. M. and D. P. H. In Great Britain, of which he was a native, he was a fellow of the Royal Society of Tropical Medicine and of the Royal Society of Entomology.

He came to Columbia in 1931 and established a field station for the study of malaria and the dis-

tribution of the parasites for therapeutic purposes at the South Carolina State hospital, this station representing an important activity of the United States Public Health service.

Doctor Mayne, while in Columbia, was identified with the social and intellectual life of the city, being a member of the Le Conte Scientific Society, the Columbia Art Association and the Quill Club. A keen amateur photographer, he was a member of the Columbia Camera club and has repeatedly given illustrated travel talks, delighting his friends with his gorgeous colored lantern slides of romantic spots in the Orient.

He was a man of scholarly attainments broadened by extensive travel and the friendship of distinguished scientists in all parts of the world, yet nevertheless unusually modest and self-effacing. His many friends will grieve to learn of his death.

From The State: Dr. Edna Simpson Valentine, for 16 years medical director of Waverley sanitarium, died at 5 o'clock yesterday afternoon at the Providence Hospital after an illness of but a few days.

Doctor Valentine, a native of Pennsylvania, came to Columbia in 1925 to assume her position at Waverley. She was born November 3, 1882, in Georgeville, Pa., the daughter of John Martin and Catherine Elizabeth Simpson. She was graduated from the Women's Medical college of Philadelphia in 1910 and did graduate work at Tulane University before serving as psychiatrist on the staff of Topeka State Hospital in Kansas. She was a member of the American Medical Association, American Psychiatric Association, and the Business and Professional Women's Club of Columbia.

Doctor Valentine is survived by one son, Wayne Valentine of Jacksonville, Fla.; two brothers, Dr. George Simpson of Indiana, Pa., and Richard Simpson of Georgetown, Pa., and one sister, Mrs. J. M. Aull of Smicksburg, Pa.

Broad Oaks Sanatorium

MORGANTON, N. C.

A private Hospital for the treatment of Nervous
and Mental Diseases, Inebriety and Drug
Habits. A home for selected Chronic Cases

JAMES W. VERNON, M.D., Supt. and Resident Physician.

PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

VITAMIN K IN OBSTETRICS

J. Decherd Guess, M. D.
Greenville, S. C.

There has been published comparatively little concerning the clinical value of Vitamin K since its discovery in 1935. The several series of experimental cases reported have each been small, but the results have been fairly uniform and the indications are becoming fairly well established so far as the value and use of this substance in obstetrics and pediatrics are concerned.

Vitamin K occurs fairly widely in nature. It has also been synthesized, and it appears that the natural and the synthetic have identical actions. Preparations of the synthetic product may be given intravenously or intramuscularly. It has a very low toxicity, and in doses of one to four mgm. per day appears to be perfectly harmless.

Vitamin K acts to increase the prothrombin level in the blood, and in doing this, provided the other elements of the clotting mechanism are present, it acts to shorten the clotting time. The substance is fat soluble, and when given by mouth there must be emulsified fat in the intestine. Bile is necessary for the emulsification of ingested fat. Expectant mothers, without serious liver damage, and nursing infants have both the bile and the fat necessary to assure assimilation of ingested Vitamin K, and so it is not necessary to give bile salts along with it.

The prothrombin level of pregnant women near term appears to be within normal limits. Postpartum hemorrhage is prevented or controlled by the contraction of uterine muscle rather than by blood coagulation. Hence Vitamin K has no value in the prophylaxis of postpartum hemorrhage. Experience seems to show that its administration does not increase the incidence of venous thrombosis.

Newborn infants have a low but variable

prothrombin blood level averaging about 25 per cent of adult normal with a variable but definitely prolonged blood clotting time. There occurs a further fall in the blood level on the second day of life which persists for about six days. Thus infants possess a defective blood clotting mechanism with an inherent tendency to bleed during their first week of life.

Hemorrhagic disease of the newborn (hemophilia neonatorum or hemorrhagic diathesis) occurs in approximately seven per cent of hospital deliveries. Retinal hemorrhage of greater or lesser degree occurs in over twenty per cent of newborn infants. Bloody spinal fluid is present in more than ten per cent of normal infants, and cerebral hemorrhage is the leading cause of death of premature infants in the first week of life and it occurs frequently in infants at term as the result of slight trauma or of moderate asphyxia (anoxia).

Vitamin K is definitely valuable in the treatment of these conditions, but it is far more valuable in preventing or in minimizing their degree. To be of greatest value the baby should have it in his tissues before birth. When the baby receives it through the placental circulation it receives it intravenously with no problem of assimilation.

The evidence seems to indicate that when given to the mother by mouth for several days before delivery or intravenously up to even one hour before delivery, Vitamin K does not raise the prothrombin level in the maternal blood, but does raise that level in the infant's blood up to or slightly beyond the adult per cent level, and that it prevents its fall on the second day.

Such prophylaxis has, in one carefully reported series, seemed to reduce the fetal mortality slightly more than 37 per cent and cut the incidence of retinal hemorrhage in half.

It seems fair to assume that antenatal routine,

adequate administration of Vitamin K to mothers will almost eliminate hemorrhagic disease of the newborn as a cause of death, and that it will prevent the slowly oozing type of cerebral hemorrhage, but it will have no effect upon massive cerebral hemorrhage from tentorial laceration.

THE OFFICE TREATMENT OF BURNS

F. E. Kredel, M. D.

Charleston, S. C.

There are three principles to be kept in mind in the office treatment of burns: first and most important to prevent infection, second to allay pain and to make the patient comfortable, and third to avoid the application of substances which will cause further tissue injury and delay healing.

The use of greases, oils, and ointments should be restricted to first degree burns because of their great tendency to seal in infection. If the family has already applied such oily materials on deeper burns, removal with green soap and ether should be done. Many types of ointments are used with good analgesic effect in first degree burns. Plain vaseline works very well but some of the mixtures containing analgesic drugs are more soothing. Butesin picrate is quite effective but occasionally causes some irritation on delicate skins. Tannic acid jelly can be used on superficial as well as deeper burns. It does not seal infection in since it is water soluble.

When a large blister is present it is best to simply clean the area with soap and water followed by alcohol or ether and to apply a sterile dressing. Puncture of the blister should be delayed for 48 hours to minimize the chance of infection. If the blister is already broken, cleansing should be followed by application of a mild, non-irritating antiseptic in aqueous solution, such as 1% gentian violet or 2% mercurochrome. A firm dressing over the blistered area minimizes exudation and promotes healing.

Smaller third degree burns can often be treated without hospitalization. Tannic acid should not be used unless the burn is treated within a few hours and all dirt and other foreign material completely removed. Otherwise infection under the crust is almost sure to develop. Gentian violet and silver nitrate are valuable adjuncts to the tannic acid method because of their antiseptic action. An acceptable technique is to paint the burn with 1% aqueous gentian violet, allow to dry, apply 10% tannic acid with applicator or spray, allow to dry, and finally paint with 5% silver nitrate. The crust thus formed is somewhat more elastic and definitely more bacteriostatic than the crust from tannic acid alone. Where tannic acid is not available, very strong tea can be substituted.

One objection to tannic acid and silver nitrate in smaller burns is the chance that they may destroy small islands of epithelium about the hair follicles, which might otherwise act as foci for the regeneration of the skin. It is often impossible to tell whether or not such islands have survived the burn. In case of doubt tannic acid and silver nitrate should be avoided, and if any attempt to form a crust is desired, chemicals less destructive to tissue should be used. Gentian violet or the Aldrich dye mixture give excellent results. The Aldrich mixture is gentian violet 2 grams, brilliant green 2 grams, and neutral acriflavine 1 gram dissolved in 250 cc. of water. But any type of crust must be watched and opened when infection develops under it.

Many small third degree burns would do better if they were treated like any other open wound, i. e., thorough cleansing, protective dressing, immobilization, and adequate drainage (no grease or crust). Absolute rest of the burned area is important both for comfort and for healing. Splints and plaster should be used more frequently. Codeine and, if necessary, morphine can be given liberally for the first few days. When a considerable area is completely denuded of skin, early grafting reduces the period of disability and minimizes deformity and scar.

IMMUNIZATION AND THERAPEUTIC PROCEDURES FOR ACUTE INFECTIOUS DISEASES

Physicians who deal with acute infectious diseases are ever anxious to obtain authoritative statements relative to the accepted methods of preventing and treating these diseases. In an attempt to meet this need a special committee was appointed by the American Academy of Pediatrics to draft a report and to revise the findings at frequent intervals.

This report contains so much material that is of value to the practicing physician that it should be in the hands of all who deal with acute infectious diseases.* Space forbids the printing of all that is contained in this report in the Journal but excerpts are presented.

— — — — —
 "Usually a new therapy is introduced in the following way: first, a disease is cured or modified in an experimental animal; second, the remedy is used in humans on a small, well controlled scale; third, a study of the experiences resulting from the widespread application of the new therapeutic principle is then made.

Not all the recommended therapy and procedures covered by this report have gone through the steps mentioned above. Pediatricians, therefore, should use some routinely, some for special reasons and some frankly in clinical experimentation.

It should be understood that the following report summarizes the opinions of today as interpreted by this Committee — those of tomorrow may be entirely different or be modifications of those now held. This report is not a permanent record of fixed beliefs."

Common Cold

Active Immunity: No active immune principle of any proven value has been described. The use of vaccines cannot be defended on immunologic grounds, although frequently employed by many good clinicians. Any spe-

cific effect obtained is probably against the secondary invaders that complicate the infection.

Passive Immunity:

Exposures: None.

Treatment: Secondary invaders are now treated with chemotherapeutic agents such as sulfanilamide, etc."

Diphtheria

Active Immunity: Diphtheria toxoid (Ramon) or alum precipitated toxoid is recommended by this Committee. Either agent may be used for children under 10 years of age in doses of 0.5 cc., 1 cc., and 1 cc. given *subcutaneously* at intervals of from 2 to 4 weeks. This amount of antigen may produce local and general reactions in older children or adults. For the latter, the dosage is therefore reduced and 0.1 cc. is injected *subcutaneously* and then 0.2 cc., 0.5 cc. at intervals of from 2 to 4 weeks. An additional dose of 0.1 cc. is given if the reactions have not been too severe. It is unnecessary to inject a large amount of toxoid. Individuals in this age group will be immunized if several doses are given with long intervals between injections. One dose of alum precipitated toxoid cannot be relied upon to immunize an individual. The Schick test may become negative within a month after the last injection.

Always do a Schick test within 6 months after immunization is completed to determine whether immunity has been established. Re-immunize if necessary. It is preferable not to immunize before 9 months as it may be difficult to do so before that age.

Some physicians now immunize simultaneously against diphtheria and tetanus. Concrete recommendations cannot be given at this time, although it might be pointed out that such injections do not interfere with the establishment of immunity against diphtheria. Occasionally patients are sensitized to diphtheria and tetanus toxoids but this condition is easily recognized by skin tests. Intradermal vaccination against diphtheria has some disadvantages and no evident superior advantages over conventional measures."

(To be continued)

* (Copies of this report may be obtained from Clifford G. Grulee, Secretary of the American Academy of Pediatrics, 636 Church St., Evanston, Illinois. Price Ten Cents. Last revision, Oct., 1940.)

MEDICAL SUMMARIES

TYPES AND PRINCIPLES OF INTERNAL FIXATION

James T. Green, M. D.
Columbia, S. C.

Internal fixation may be defined as the fixing of fractures with an agent other than that normally present at the fracture site, or the addition of some material to hold the fragments of bone together. In 1905, Lane described a method of internal fixation which was soon taken up as a popular measure. As is true with many good ideas soon after they are originally described, it was done by men who were unqualified. As a result the method was discarded incident to reaction of the tissues to the metal, and to infection due to faulty technique. For a number of years following, the use of internal fixation was frowned upon by men doing bone work.

Today that attitude is greatly reversed and it is used so often that in almost every medical journal someone describes a new mechanical idea or a new gadget for internal fixation. Not only is it more frequently used but in many cases, it is almost imperative in order to obtain good function. It must, of course, be admitted that the application of physiological principles of bone embodies the minimal use of foreign material. It has been shown by experimental work and clinical observation that a number of metals and mechanical devices are of practical value. The use of these as agents of internal fixation, where necessary, diminishes mortality and morbidity and does much for the comfort of the patient. As an example of this, prior to the use of internal fixation in the treatment of fractured hips, it was necessary that the patient remain in a large hip spica for long periods of time with the prospect of death from some cause, or of non-union of the fragments. Now, with internal fixation, the patient with a broken hip can expect a 90 per cent chance of getting solid bony union. Not only

is there improvement in the treatment of hips, but fractured femurs and other bones can be fixed so that the application of a cast is unnecessary and motion can be started early.

The routine treatment of fractures by open reduction and application of some type of internal fixation is not recommended. There are, however, certain fractures which cannot be held by the simple application of a cast or splint. These should be opened immediately and internal fixation applied. The earlier after fracture that these cases can be opened the better the result should be. By quick action, large blood clots can be evacuated and the surrounding tissues can be kept from becoming boggy and unhealthy.

There has always been a demand for some material, preferably absorbable, which could be used to hold bone fragments together. The ideal material should be strong and non-irritating. In the search for this material, the whole gamut has been run. Autogenous and homogeneous bone, many pure metals such as silver and iron, many animal tissues such as beef bone and hartshorn, alloys such as vanadium steel, vitallium, and stainless steel, have been used with varying results. At the present time, it can generally be said that the materials of choice are autogenous bone, vitallium, and stainless steel. In search of the reason for failure of many of the metals, the inherent chemical property—electromotive force—was studied and it was found that the electrolytic activity between the metals caused damage in the body. Certainly electrolysis plays a part in some of the failures but all blame cannot be placed on this one factor. Vitallium and stainless steel alloy of low nickel—high chromium are least active in their electrolytic activity. Vitallium is probably the least irritating in the tissues but stainless steel is the stronger, more easily worked, and seemingly the more practical. In almost two hundred cases of hips fixed with stainless steel, there has been no evidence of irritation from the stainless steel itself. In no instance has there been an infection as a

Read before the Richland County Medical Society, May, 1941.

result of the metal. In a few instances where there was a difference in the composition of the stainless steel in the shaft and nut of the nail, some corrosion due to electrolysis has been noted. All nails that have been removed are glistening and shiny throughout, except in those instances just mentioned.

The primary principle in the application of internal fixation is the holding of bone fragments together in order to secure normal healing. Each fracture presents a different mechanical problem and the mechanics of fixing each fracture have to be thoroughly understood in order to obtain good results. Certainly the better mechanic a surgeon is, the better should he be able to apply internal fixation. Bones have to be held in contact and held rigidly. Fractional irritation at the site of fracture or at the site of internal fixation will cause bone absorption, loosening of the internal fixation, with resultant delayed or non-union. The internal fixation must not hold the bones apart because bone will not bridge a gap and should the fragments be held apart, non-union is likely to result. Internal fixation, no matter what the case may be, has to be done under the strictest aseptic conditions and anyone doing this work should have a full armamentarium. In a fresh fracture, perfect reduction should be obtained and then the type of internal fixation which rigidly immobilizes the fragments, whether it be a plate, bolt, screw or wire, should be applied. In cases of non-union, an autogenous bone graft fashioned as a plate is a good choice. This plate can be held on with bone pegs or with some type of metal fixation.

In doing bone work of any kind the simplest and safest method which will adequately hold the fragments together should be followed. If comparable results can be obtained by conservative methods, then certainly the use of internal fixation is not advocated.

ACUTE EMPYEMA THORACIS

In an article in *The Journal of Thoracic Surgery* (10:354, (Feb.) 1941), Hochberg reports a study of 300 cases of acute empyema thoracis. The contributions of Graham and Bell as a result of the study of the causes of the

high mortality from empyema during the influenza epidemic of 1918, are pointed out, and to be sure, one must have a knowledge of these in order to treat empyema intelligently and successfully. Briefly they showed that neither the lung nor the mediastinum was stabilized during the early stages of an empyema, and that an open pneumothorax at this time caused a displacement of the mediastinal structure into the contralateral hemithorax, with interference with the function of the opposite lung.

The 300 cases consisted of 132 streptococcal and 168 pneumococcal empyemas. The criterion for the diagnosis was the presence of frank pus in the pleural cavity.

The three principal methods of therapy used were aspiration, intercostal drainage, and rib resection drainage. The following pertinent observations regarding each were made.

Aspiration should be employed only for diagnosis, or for palliative treatment; very seldom does it suffice for cure. Repeated aspiration may be dangerous, since subcutaneous abscess or cellulitis of the chest wall may follow.

Closed intercostal drainage has advantages over aspiration in that it requires but one entrance into the pleural cavity, and can be arranged so as to function continuously. The most striking and dramatic results of closed intercostal drainage were obtained in those cases in which the patient was acutely ill, in which there was cardiorespiratory embarrassment, and in which the pus was thin. The relief in some such cases in which there was a massive effusion, was often striking, and indeed, saved the life of the patient. When the pus is no longer thin or when there has been a delay in the institution of drainage, this method is seldom adequate for cure.

Rib resection drainage ensures the best method of drainage, with no additional embarrassment to the patient, except in those cases in which it is definitely contraindicated. In cases of early empyema, especially in the streptococcal type, rib resection drainage should be delayed until the pus becomes thick. In the pneumococcal type, rib resection drainage may be instituted as soon as the patient's condition warrants surgical intervention, which is usually after the pneumonic process has subsided.

Rib resection drainage is particularly applicable in those cases in which the empyema is uncomplicated and in those complicated by broncho-pleural fistula.

Edward F. Parker, M. D.
Charleston

SYMPTOMS OF GASTROINTESTINAL ORIGIN IN THE EAR, NOSE AND THROAT

All physicians who deal with patients in the field of ophthalmology or otolaryngology will frequently find individuals with symptoms pointing toward trouble in the eye, ear, nose, or throat who fail to reveal any pathological processes in these organs despite exhaustive search. That these symptoms may be arising from the gastro-intestinal tract is often overlooked, as is forcibly brought out by W. L. Gatewood (Arch. Otolaryng. Apr., 1941). His article is so timely that we present this abstract.

Chief among the complaints for which no pathological condition in the ear, nose, or throat exists as a causative factor are:

1. A persistent post-nasal drip (after diseases of the sinuses has been definitely ruled out).
2. Vertigo and a sense of fullness in the ears (when no pathological condition in the aural condition is found).
3. Rhinorrhea, associated with manifestations of hay fever.
4. Dryness and stuffiness of the nasal mucosa, accompanied by headache, burning of the eyes, and a sensation of pressure at the root of the nose.
5. Ocular palsy involving the extraocular muscles, accompanying frontal headache.
6. The "lower half headache" of Sluder, consisting of pain about the eye, the upper jaw and the teeth, extending to the zygoma and temple with earache and pain in the mastoid, extending thence to the occiput, neck, shoulder, scapula, arm, forearm, hand and fingers.

The gastrointestinal disturbance may be of allergic origin or from a toxemia caused by a spasticity or irritability of the colon or by a

mild form of chronic ulcerative colitis which often goes unrecognized.

When a patient presents himself complaining of trouble with the ears, nose, or throat, the cause of which is not immediately apparent on physical examination, a most thorough family and personal history should be elicited without delay. The personal history will nearly always show that the patient has been subject to "attacks" which can be attributed to certain foods. If the patients are females there is often a history of operations, the results of which have been unsatisfactory. Should the history reveal a gastrointestinal upset at the onset of the symptoms, the services of a competent gastroenterologist will prove of great help.

(Space forbids the abstracting of all the cases mentioned, but a single report will afford as a good example;)

Mrs. M. For seven months she had been suffering from multiple arthritis, which involved the arms, wrists, knees, ankles and feet and which caused such severe suffering that opiates had to be used. For four and a half months she had been subject to attacks of vertigo. A diagnosis of a tumor of the eighth nerve had been made and an operation advised. My diagnosis was toxic labyrinthitis, secondary to absorption of toxic substance from the intestinal tract. The patient was referred to a gastroenterologist. A treatment was outlined which gradually freed the patient from the vertigo and eight months later it had entirely disappeared.

I have found intestinal antiseptics valuable. My patients have obtained benefit from the administration of soricin (sodium ricinoleate) and also dihydranol. Soricin is given in capsules (each containing 10 grains of the drug) in the dose of one capsule three times a day. Dihydranol is also put up in capsules (2½ grains in 8 minims of olive oil) and the dose is two capsules immediately after each meal, increased to three capsules if necessary. These drugs are alternatives, soricin being the choice in milder cases. Treatment with either should be

continued from three to six weeks, depending upon the amount of improvement in the patient's general condition.

In addition to the dietary and medicinal treatment, there is instruction as to general

hygiene. The patient would be impressed with the importance of adequate rest, moderation in the use of coffee and alcoholic beverages, and the need of outdoor exercise.

John H. Townsend, M. D., Charleston

AROUND THE STATE

Effort will be made to secure and publish news concerning the activities of individual physicians, and of the various medical societies of the state. Members of the Association, and especially secretaries of county societies, are urged to send in news items to the Editor.

Special

The Journal wishes to join with the members of the Edisto County Medical Society in congratulating Dr. J. K. Fairey of St. Matthews upon his completion of fifty years of active medical practice and upon the occasion of the fiftieth anniversary of his wedding, and is delighted to print the following letter which expresses the sentiments of all who know Dr. Fairey.

Dr. J. K. Fairey
St. Matthews, S. C.

Dear Dr. Fairey:

The recent celebration by you of your Fiftieth Anniversary as "Practitioner of Medicine" and of your wedding was called to the attention of the members of The Edisto Medical Society, at a meeting held April 30, 1941.

By unanimous vote a committee was appointed to express to you and your wife our heartiest congratulations and felicitations and to convey to you, the love and esteem in which you are held by the members of our Society; composed, as you know of the counties of Calhoun, Bamberg and Orangeburg. Some of us have known you many of the fifty years you have practiced medicine, and write from personal knowledge and association.

You have won the respect, admiration and confidence of your brother physicians and indeed of all who know you — both layman and physician — because of your pleasing and charming personality, your devotion to duty, your faithful, kind, skillful and loving ministrations, to the sick, afflicted, and injured — often without thought of remuneration. Your absolute honesty and strict observance of the rules, regulations and courtesies of our professional code of ethics, and in keeping abreast

of the great and constant changes in medicine by your attendance upon medical meetings and the reading of the best journals and books.

Truly, you have exemplified in your life, as a man and physician, those qualities, that have won the respect of the civilized world, for our great and honored "Profession of Medicine" — especially as it pertains to the "General Practitioner of Medicine."

You, typify, in our humble opinion as well as anyone we know — the oft quoted statement, "A gentleman and physician of the old school."

With best wishes to you and Mrs. Fairey, for many years of good health, happiness and usefulness.

Edisto County Medical Society.

Society Reports

The North Carolina Medical Association met in Pinehurst May 19 to 21 with a big attendance. Dr. Frank Lahey of Boston was the main guest speaker. Dr. J. P. Price attended the meeting as a representative of the South Carolina Medical Association.

Dr. George Truluck, President of the South Carolina State Association attended the meeting of the Georgia State Medical Association in Macon.

News Items

Dr. William Atmar Smith was elected Vice President of the American Trudeau Society at its annual meeting held at San Antonio, Texas on May 5. Dr. Smith made the trip to San Antonio by plane.

Drs. John B. Cousar and L. B. Keels of Bishopville have both entered military service.

Dr. George R. Wilkinson of Greenville was elected President of the Greenville County Mental Hygiene Society upon its organization on April 3.

Dr. Thomas H. Pope of Newberry was elected Vice President of the Board of Trustees of the Medical College of South Carolina.

Dr. I. Grier Linton of Charleston has been called to active duty at the Charleston Navy Yard.

Dr. William T. Rice of the staff of Roper Hospital has moved to New Castle, Pennsylvania.

Dr. A. W. Welling, formerly of Newberry is now stationed at Camp Livingston.

Dr. W. B. Timmerman of Hartsville has entered the service of the United States Army and is stationed at Camp Wheeler.

Dr. J. B. Workman of Ware Shoals had three twin deliveries in less than a week. Twins were delivered on April 18, 21, and 23. One set of twins was premature and died but the others are doing well.

The Physicians and Surgeons Building, 1515 Bull Street, Columbia, has been completed and the following physicians have moved in: Drs. Leon Bryan, H. R. Coleman, B. N. Miller, F. E. Zemp, F. P. Coleman, R. B. McNulty, J. B. Workman, H. E. Wyman, C. A. Sweatman, J. B. Sistrunk, Katherine McInnis.

Dr. C. N. Wyatt of Greenville was recently elected President of the Greenville Lion's Club.

Dr. R. M. Pollitzer of Greenville recently addressed the Greenville Lions Club on socialized medicine.

News of the Medical College

Commencement exercises were held June 5th in the Memminger Auditorium. The principle speaker was Dr. Wyndham Bolling Blanton, Associate Professor of Medicine at the Medical College of Virginia, Editor of the Virginia Medical Monthly, and past President of the Richmond Academy of Medicine.

Work is progressing on the Simon-Baruch Memorial Auditorium which will be ready for use in the fall. It will seat the entire student body and faculty.

The physical examinations for selective service in the Charleston District are being

conducted in the Alumni Memorial Clinic with members of the faculty assisting in this work.

Members of the Board of Trustees and of the faculty at the Medical College joined the physicians of the state in expressing delight over the order from the selective service deputy director deferring military training for medical students who "give reasonable promise of becoming acceptable medical doctors."

New Physicians

Dr. H. R. Coleman has moved to Columbia where he is engaged in the practice of ophthalmology and otolaryngology.

Dr. J. B. Workman has opened an office in Columbia for the practice of ophthalmology.

Dr. Landon D. Walker is now engaged in general practice in Pageland. Dr. Walker came from Charlotte where he has been doing general practice for twenty years.

Dr. George R. Cousar, Medical Missionary in the Belgian Congo for the past few years is established in Bishopville and is taking care of the practice of his brother Dr. John B. Cousar.

Allen's Invalid Home



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NERVOUS AND MENTAL DISEASES

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Milledgeville, Ga.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

Case of Dr. G. P. Richards

ABSTRACT NO. 438 (74420)

Student E. R. Barber (presenting):

History: This 46 year old negro man admitted on 3-8 with chief complaint of "weak and can't swallow." Onset of illness about 1-10 when he suddenly felt weak in the entire right side of his body. He had been in excellent health prior to this and working nearly every day, but was then unable to return to work. Three to four weeks after onset his tongue became weak, speech difficult and he was unable to cough, could not eat solid foods and subsisted on liquids. For month prior to admission however he had trouble swallowing liquids—seemed to stop in his throat and could take only very small amounts. Lost 40 lbs. since onset of illness. Diplopia of 3 weeks duration.

Physical: T. 98.6 P. 94 R. 24 BP 180/130, right arm; 162 110, left arm. Appeared to be chronically ill. Marked hoarseness, just talks above whisper. Skin normal. Ocular movements good. Pupils normal. Nose, right septal deviation. No deviation or tremor of tongue. Uvula normal. Tonsils ragged and atrophic. Submaxillary glands palpable. Patient apparently unable to close glottis to cough. Chest symmetrical; expansion equal; diaphragmatic component seems diminished. Lungs clear. Bases equal; unable to demonstrate any discent on either side. Mediastinum not widened. PMI in 5th ICS outside MCL. No murmurs; sounds good; rate and rhythm normal. No arterial sclerosis or venous distension. Abdomen scaphoid. Slight tenderness in epigastrium to left of midline. No masses. No local muscular atrophy. Cranial nerves intact. Abdominal and cremasteric reflexes absent; others normal. General muscle weakness. Posterior tracts, cerebellar system, ascending and descending tracts OK. (Purposeless movements of hands, nystagmus tremors of lips and tongue and left facial weakness—recorded in clinical record.)

Laboratory:

Urinalysis 3-8

Sp Gr. 1.037

Reaction Acid

Albumen 3 plus

Sugar 0

Acetone 1 plus

Microscopic neg.

Blood 3-8

RBC 5.49

Hb. 12 gms. 3-10 13 gms.

WBC 10,825. 3-10 13,325

PMN 79%

Urea N. 3-10 27 Mg.

Spinal fluid and blood Wassermann: Negative, 1 month previously.

Course: Patient had numerous attacks of cessation of respiration during which he became cyanotic, but continued to have a strong regular pulse. Responded to oxygen, stimulants and artificial respiration. During such an attack on 3-12 he expired.

Dr. W. H. Kelley (conducting): Miss Riley, will you give us your interpretation of the disease or diseases that this man might have had?

Student Riley: I think myasthenia gravis is the disease condition that most completely fits the picture. The muscle weakness without muscular atrophy or degeneration together with such bulbar signs as difficulty in swallowing, speech defects, and episodes of cessation of respiration as well as weight loss are all consistent with the diagnosis of myasthenia gravis. It would have been interesting and helpful to know what his response to prostigmin might have been.

In the differential diagnosis I also considered a pseudo-bulbar palsy. This disease affects the upper motor neurones with resultant loss of voluntary muscle control. Here there are actual organic lesions of the nervous centers that supply the muscles. These lesions are usually produced by vascular pathology, such as arteriosclerosis, with softening and degeneration of the brain substance.

A true bulbar palsy also has to be eliminated. In this disease there is an actual degeneration and atrophy of the muscles accompanied by fibrillary contractions which are not present in the pseudo-bulbar type, or in myasthenia gravis. In addition there is usually a history of antecedent hemiplegia or sensory changes in the pseudo-bulbar type.

Subacute epidemic encephalitis might also be mentioned, but this case did not present any substantiating clinical evidence such as fever, coma, or evidence of inflammatory activity.

Dr. Kelley: Involvement of what neurone is responsible for the production of the muscular fibrillation?

Student Riley: I have read that it is the upper motor neurone.

Dr. Kelley: I am afraid that you and I do not consult the same text. Mr. Martin, what are your ideas about this case and what other possibilities can you mention?

Student Martin: I would like to have some information about the spinal fluid dynamics, so as to rule out the presence of a tumor about the brain stem.

A muscle biopsy might also have yielded some information. Another important procedure which might have helped would be the reactions to electrical

stimulation. There is the reaction of degeneration in true bulbar palsy which you do not find in myasthenia gravis or pseudo-bulbar palsy. There is almost always the so-called Jolly myasthenic reaction, however, which is an increased fatigability to the faradic current and a normal response to the galvanic current.

It may have been hazardous, but the patient could have been given quinine to see if it aggravated his symptoms. The therapeutic response to prostigmin remains as one of the most important differential criteria.

Dr. Kelly: Prostigmin, caffeine and adrenalin were administered almost simultaneously during his periods of apnea and in the course of about fifteen minutes, during which time artificial respiration was given, he would slowly resume his normal respiratory rate which would be maintained for four to six hours.

Student Martin: In spite of the multiplicity of the drugs used, I think the response is significant, because I do not believe he would have responded unless prostigmin had been included.

Dr. Kelley: What makes you think that this man could not have had diphtheria?

Student Martin: Well, he was sick for about three months, had no temperature, so I can scarcely see how this enters the picture.

Dr. Kelly: If you read the accounts of the neurological changes occurring after diphtheria I think you will see that it is not a too remote possibility. What about poisoning with curare?

Student Martin: His symptoms would have been persistent and he would not have shown transitory improvement.

Dr. Kelly: What about peripheral neuritis?

Student Martin: I believe he would have had a good deal of pain and do not think he would have succumbed so quickly.

Dr. Kelly: Mr. May, do you have any more light to throw on this problem?

Student May: The difference in blood pressure in the arms and the difficulty in swallowing suggests that there may have been some obstructing mass in the mediastinum. The dysphagia particularly suggests carcinoma of the oesophagus, but the bronchial tree would also have to be investigated. These could be eliminated by X-ray of the chest, bronchoscopic and oesophagoscopy examinations.

Dr. Kelley: Why did he have fever during the last forty-eight hours?

Student May: I think he had a terminal pneumonia, probably on an aspiratory basis.

Dr. Kelley: I didn't examine this patient fully, having an arm chair consultation as it were. I saw part of the post-mortem examination and my re-

action was close to that of the students. I felt that the onset was very rapid and dramatic for myasthenia gravis. It is usually a slow insidious disease beginning first in the eye and then in the masticatory muscles.

It would have been nice to know his creatine determination and also to have had an anterior and posterior x-ray of the chest, as 50% of these cases have an associated thymoma. The muscle response to electrical stimulation is also a more accurate way of measuring muscle fatigue.

Dr. Cox: (Demonstrating gross organs and microscopic sections): We hope to present the findings that are consistent with myasthenia gravis, but do not pretend to illustrate specific pathognomonic features. There are only two positive findings that are definitely related to myasthenia gravis. The first you see here consisting of a definite encapsulated tumor nodule in the mediastinum measuring about 4 cm. in diameter and showing cystic spaces on section. The other finding was a redundant and atonic diaphragm which seemed too big for the man it was found in. Slight thickening of the leptomeninges was also noted at necropsy. The tumor is consistent with the thymic tumors found in this disease, consisting microscopically of a lympho-epithelial growth. In 87 autopsy cases recorded in the literature, 47 showed a thymic enlargement of this order.

There were also the lymphorrhages scattered through the diaphragmatic musculature. These were first described by Weigert who thought that they were metastatic growths.

There was some ganglion cell degeneration in the brain as well as some fresh peri-vascular hemorrhage which I ascribe to the anoxemia associated with his attacks of apnea. There is no gliosis.

Dr. Kelley: This is a very unusual case for us. It is more likely a symptom-complex than a disease. The same changes may be found in the muscle in certain diseases of the thyroid gland and the thymus is a very irregular sort of gland so far as its function is concerned, so that its evaluation is difficult. Creatine is normally absent in the urine of men with normal temperature and B. M. R., but is excreted in myasthenia gravis, although in not as great amounts as in the muscular dystrophies.

It is believed that the disease affects the myoneural junctions. Transmission of impulses at this junction depends upon the liberation of acetylcholine at the periphery of the motor end plates. In myasthenia gravis either there is excess choline esterase which neutralizes the acetylcholine, or there is failure of the acetylcholine to form. It is believed that the physostigmine or prostigmin inhibits choline esterase activity so that it cannot destroy the acetylcholine so rapidly.

BOOK REVIEWS

TABER'S CYCLOPEDIA MEDICAL DICTIONARY

F. A. Davis Company, Philadelphia

A small, handy medical Dictionary for every day use.

Of special interest at the present time is the Interpreter in the appendix. 373 simple phrases are listed in five languages (English, French, German, Italian, Spanish), phrases which are "specially arranged for diagnosis."

J. P. P.

TEXTBOOK OF PEDIATRICS

J. P. Crozier Griffith and A. Graeme Mitchell
Third Edition—W. B. Saunders Co., Philadelphia

There is no better single volume reference book on Pediatrics on the market today than this last edition of Griffith and Mitchell. Completely revised, this book (formerly titled "Diseases of Infants and Children") is up to the minute in information, is well illustrated, and is so arranged that information sought is easily found and easily read.

Such is the opinion of the reviewer who has kept a former edition of the book within arm's reach in his office for years, and he highly recommends it to any physician who deals with children and pediatric problems in his practice.

J. P. P.

THE MASK OF SANITY

Hervey Cleckley, B.S., B.A. (Oxon), M.D.
Professor Neuropsychiatry, University of Georgia
School of Medicine, Augusta, Georgia

The C. V. Mosby Company—St. Louis.

In this rather comprehensive study the author calls attention to that very large group of mentally abnormal individuals who are so difficult to classify by the customary standards of psychiatry. To the term "psychopathic personality" he gives a dynamic meaning through the inclusion of some fifteen case histories dramatically presented in most readable fashion. No physician who reviews these histories will fail to recall similar instances in his own practice of patients who show outwardly the convincing "mask of sanity" but whose behavior over the years has given conclusive proof of moral obliquity and emotional dementia. The author shows clearly how this lack of normal emotional reaction may result in the most revolting acts, frequently of criminal nature, which go inadequately punished because the perpetrator is adjudged insane in court but soon released from custody for want of con-

vincing proof of insanity. His conclusion that such patients should no longer be classed as "border-line" cases seems amply justified despite the implication that this view would practically double the number of mental patients under institutional care. This solution is obviously infinitely preferable to the "hope, rage, despair and general confusion" which is the lot of these countless relatives, friends, judges, jurors and policemen whose task it is at present to try and adapt these unfortunates to a life they never truly comprehend. Although written primarily for psychiatrists and in places teeming with the abstruse verbiage of that specialty, this book is on the "must" list for all doctors who deal with alcoholics, psychoneurotics and family skeletons.

W. R. M.

ESSENTIALS OF DERMATOLOGY

By Norman Tobias, M. D.

Senior Instructor in Dermatology, St. Louis Univ.

J. B. Lippincott Co., Philadelphia, Pa.

This book has a number of values to commend it. Its comparatively small size permits access to the doctor's bag or to the pocket of his car, and since the text and illustrations are both practical and comprehensive, it forms a useful quick reference work.

Particularly attractive is the newer grouping or classification of the various diseases and disorders of the skin, and it is pleasing to note the increased emphasis placed upon the role of metabolic disorders as affording background for the development of many cutaneous lesions.

It should have a distinct appeal alike to the man in general practice and those particularly concerned with dermatology.

L. J. R.

The True Economy of Dextri-Maltose

It is interesting to note that a fair average of the length of time an infant receives Dextri-Maltose is five months: That these five months are the most critical of the baby's life: That the difference in cost to the mother between Dextri-Maltose and common sugars is about \$7 for this entire period—a few cents a day: That, in the end, it costs the mother less to employ regular medical attendance for her baby than to attempt to do her own feeding, which in numerous cases leads to a seriously sick baby eventually requiring the most costly medical attendance.

HOUSE OF DELEGATES

The House of Delegates of the South Carolina Medical Association assembled in the ballroom of the Poinsett Hotel, Greenville, South Carolina, on Tuesday, April 15, 1941, for its ninety-third annual meeting. The President of the Association, Dr. W. L. Pressly, of Due West, presided and called the meeting to order at three-thirty o'clock p. m.

After a few brief introductory remarks, the President called for the report of the Committee on Credentials. Dr. Roderick McDonald, the Chairman of that committee, reported fifty members of the House of Delegates present.

The President then called upon Dr. G. M. Truluck, the President-Elect. Dr. Truluck spoke of the difficulties confronting the Association because of the loss of Dr. E. A. Hines, long its Secretary, and because of the fact that many members will probably be called into service in the Army and Navy. He promised his best efforts for the advancement of the interests of the Association and the profession and asked the support and cooperation of the members.

The report of the Secretary-Treasurer was called for, and this was read by that officer, Dr. J. P. Price.

REPORT OF SECRETARY-TREASURER

To the Members of the House of Delegates of the South Carolina Medical Association.
Gentlemen:

Tomorrow morning a fitting tribute will be paid to the late Dr. E. A. Hines. But as I stand to read the Secretary's report — the report which we have heard him read for so many years — I cannot refrain from paying my personal tribute.

When Dr. Hines passed away, the South Carolina Medical Association lost its hardest worker and most faithful friend. In season and out, he gave of his time and energies unstintingly and untiringly—so much so that the activities and progress of the Association became a very part of his being and when a physician spoke of the State Association he thought of Edgar A. Hines. It is true that he received a salary but the salary was always of secondary concern to him and such was his nature that it was only paid after all other obligations of the Association had been met. That the Association is in the good condition which we find today is due in large part to the loving, faithful, and wise service which he rendered.

For all this and more we are truly grateful and I am glad to pay honor to his memory.

Since my appointment as Secretary was a temporary one, I made no attempt to move the office

to Florence but have carried on the work from Seneca. Naturally this has been difficult, and that it has worked at all has been due to the faithful service of Miss Leola Hines as stenographer. Having been associated with her father for years, Miss Hines was acquainted with all the details of the office and her knowledge and efficient work has been invaluable.

Early in January I went to Seneca and there, in company with Dr. Pressly and Dr. Waring, went over all the records. These records, including those dealing with the finances of the Association, were in excellent condition and would reflect credit to any organization. There are certain changes which might be made to increase the efficiency of the office but these are relatively minor and they were left to the discretion of the permanent Secretary-Treasurer.

The financial statement, prepared by the Auditor, has been printed in the Journal and a detailed report has been presented to each member of the Council.

Since assuming the position of Secretary I have endeavored to carry on the work as best I could. I have had several conferences with the President of the Association and with the Chairman of Council. I have attended one district and several county society meetings. I have met with the General Committee here in Greenville relative to the program and preparations for our annual meeting. I have answered the usual and unusual letters which have come to my office. I have paid all outstanding obligations, I have tried to keep the office going, and I have received and deposited all dues. Needless to say, my separation from the office in Seneca has rendered my work far from efficient. But through it all, I have found the members of the Association as long-suffering, as cooperative, and as friendly a group of physicians as is to be found anywhere. And to each member of the Association who has helped me I proffer my sincere thanks. Especially do I wish to publicly express my appreciation to Dr. "Buck" Pressly and Dr. Tom Pitts for their valuable suggestions and aid.

It would be out of place for one who has assumed the office of Secretary for only three and a half months to make any extensive observations, recommendations, or prognostications. I am leaving all this to my good friend, the Chairman of Council.

It is obvious to all of us, however, that the immediate future is more uncertain than it has been for a long time. More and perhaps many more of our members will be called to military service and the medical burden of those who are left will be

HOUSE OF DELEGATES

(April 15, 1941, Greenville, S. C.)

correspondingly increased. Changes in the whole structure of medical practice are even now being advocated by some in high places and before many months have passed, some of these changes or their substitutes may become the law of the land. It is up to us, individually and as an Association, to study these trends of the times and to fight for and maintain a place of leadership in all matters dealing with the medical welfare of our people. All too frequently we, as physicians, have opposed any and all changes which have been suggested and have given the impression that we are perfectly satisfied with things as they are. In this day of turmoil and social upheaval, it is not only hazardous for us to adopt such an attitude but it may prove ruinous.

Medical practice may and probably will change. May it be said of South Carolina, however, that the changes in this state shall be brought about through the cooperation and under the leadership of the South Carolina Medical Association.

In conclusion, therefore, let me beg of you—you who represent the physicians of the state—that you cast aside all criticism save that which is constructive and that you pledge your whole-hearted support

to those men whom you shall choose this day to lead us through the coming year.

Respectfully submitted,

J. P. Price, Secretary.

Dr. J. I. Waring then read his report as Acting Editor-in-Chief of the South Carolina Medical Journal.

Report of the Acting Editor-in-Chief

Upon request of the President, I undertook the duties of the Editor-in-Chief of the Journal immediately after the death of Dr. Hines. There was very little material on hand and every effort has been made to secure suitable articles and other items to carry on an acceptable publication. Your Acting Editor has handled only the publication end, without going into the financial details, which have been left in the hands of Miss Hines and the Acting Secretary.

It has been the aim of the Acting Editor to publish only material which seemed to be reasonably general in its interest, as he feels that a journal which is limited in size by reason of a relatively small contributing membership, cannot afford to carry extensive articles which are of interest to only a small number of members.

For the local Treatment of Acute Anterior Urethritis

(DUE TO NEISSERIA GONORRHEAE)



A complete technique of treatment and literature will be sent upon request

*Silver Picrate is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

Silver Picrate, Wyeth, has a convincing record of effectiveness as a local treatment for acute anterior urethritis caused by *Neisseria gonorrhoeae*.¹ An aqueous solution (0.5 percent) of silver picrate or water-soluble jelly (0.5 percent) are employed in the treatment.

1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph., Gon. & Ven. Dis.*, 23, 201 (March), 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA

HOUSE OF DELEGATES

(April 15, 1941, Greenville, S. C.)

Your Acting Editor has been somewhat in the position of the doctor who is called in an emergency to render first aid until the family can decide on a more permanent attendant. Consequently, without definite suggestion from the officers of the Association, he has been rather unwilling to attempt any drastic changes in the Journal until more definite arrangements are made. Minor changes in the appearance of the cover, in arrangement of type, in filling empty spaces, etc., have perhaps made the general appearance more pleasing, without making any real change in the character of the Journal. A pamphlet describing the type of papers desired for the Journal has been sent to a number of potential contributors.

In the past few months, your Acting Editor has learned a number of things about the Journal. He has learned that this magazine does not entirely fulfill its purpose of being the official organ of this Association, inasmuch as it is not often utilized for communication by such of your official bodies as the Council, the State Board of Health and the various standing committees. Nor do county medi-

cal societies use it as a medium of record for their activities. This is perhaps more noticeable in regard to the larger societies. Appeals to the secretaries have fallen largely on deaf ears. In other words, he has found that there is a considerable apathy about contributing to the Journal, or else a dissatisfaction about it, which is emphasized by silence.

He has learned also that in the past, the Journal has published sometimes articles of little or no scientific merit and he has found that good promises are easier to get than good papers. He has come to feel that it is more important to publish a few good papers than many poor ones, and short papers rather than long ones.

The Acting Editor has had some unresolved doubts about the present system of departments with separate editors and feels that some of our editors are able and willing, some able and unwilling, and some perhaps able, but definitely mute. From curiosity, he has tabulated the departments for the past six years. Departmental editorials appeared 128 times in 72 issues. Of these, Surgery led the count, Eye, Ear, Nose & Throat came next, and Obstetrics & Gynecology close behind. These three departments provided about 83 per cent of all the departmental editorials. The list follows:

NATIONAL ASSOCIATION OF CHEWING GUM MANUFACTURERS, STATEN ISLAND, NEW YORK

A friendly suggestion:

Your "littlest" patients aren't the only ones, Doctor, who enjoy wholesome **CHEWING GUM**

The enjoyment of delicious chewing gum is a real American custom—probably because chewing is such a basic, natural pleasure.

Enjoy chewing gum yourself. See how the chewing helps relieve tension by giving it a try during your busy days.

Have some gum in your pocket or bag and in the office. Your patients—children and adults—appreciate your friendliness when you offer them some. Try this for a month—you'll be pleased with the results.

HOUSE OF DELEGATES

(April 15, 1941, Greenville, S. C.)

<i>Departments</i>	<i>No. of Editorials</i>
1. Surgery -----	47
2. Eye, Ear, Nose & Throat -----	30
3. Obstetrics & Gynecology -----	27
4. Orthopedic Surgery -----	6
5. Dermatology & Syphilology -----	5
6. Nervous and Mental Diseases -----	4
7. Pediatrics -----	4
8. Internal Medicine -----	3
9. Gastro-Enterology & Proctology -----	2
10. Public Health -----	2

The type of editorial which is simply an extended abstract of a paper, and perhaps rather specialized in its interest, does not seem to me to be desirable for the Journal.

Your Acting Editor feels that the chief way for improvement of the Journal is by an increase of interest in its welfare among the whole membership. The size of the Journal depends upon the money obtained from subscriptions and upon the funds received from advertising, which in turn depend upon circulation. Since the membership of our Association is relatively small, it follows that the size of our Journal can be increased only by advertising or

membership dues. The present income of the Journal does more than support it. The quality may be increased by a strict editorial policy and by an increase of use by county societies and by subsidiary bodies of the Association—and perhaps by a moderately soft pedal on the accounts of the salad courses served by the Woman's Auxiliary. Investigation of costs of printing does not suggest that the Journal can be produced at any considerable saving over present expenses.

It has seemed to your Acting Editor that in the past, there has been little contact of the members of the editorial staff, or opportunity for free discussion of policy. As an initial attempt to correct this defect, he has asked the President to call or authorize some such meeting in connection with the annual meeting of the Association. Even the position of Assistant Editor has been only nominal and it would seem advisable that it either have definite duties attached, or else be abolished.

It has been a pleasure for your Acting Editor to carry on the efficient work of Dr. Hines. It has been a revelation to find the amount of effort required for such a purpose, and I wish to acknowledge with sincere thanks, the valuable assistance which has been given to me by Miss Leola Hines, by Mr. Herbert Provence of the Provence-Jarrard Company, and by others connected with the Journal.

(To be continued)



PAUSE...AT THE FAMILIAR RED COOLER

Drink



Delicious and Refreshing

SOCIETY REPORTS

The Edisto Medical Society met at Orangeburg. Dr. L. C. Sheent presented a paper on **Complications Following Chicken Pox** and Dr. O. Z. Culler on **Landry's Paralysis**.

At the monthly meeting of the Chester County Medical Society Dr. J. M. Gaston, Jr. read a paper on **Obstetrics in General Practice**. It was voted to discontinue meetings until September.

Over 150 members and guests of the Columbia Medical Society gathered in Columbia to hear an address by Dr. Walter C. Alvarez of Rochester, Minnesota, who discussed **The General Problem of Diagnosis of Abdominal Pain**. The address was enthusiastically received. Dr. James T. Greene of Columbia also read a paper, **Types and Principles of Internal Fixation of Fracture** which is printed elsewhere in this issue of the Journal.

On April 8 the Medical Society of South Carolina heard an illustrated address on **Practical Observations on Diseases of Children Affecting the Skeleton**. A talking picture entitled **Studies in Human Fertility** was shown by Dr. Holman of the Ortho Products Co. At the meeting on April 22 Dr. R. M. Hope gave a paper on **Meniere's Disease** and this was followed by the guest speaker, Dr. Louis H. Clerf of Philadelphia, who spoke on **Differential Diagnosis of Hoarseness**. At the regular meeting on May 13 a paper on **Hot Lap Pads** by Drs. F. E. Kredel and H. Smithy. This was followed by a case report, **Results with Sulfathiazole in Pneumonia** by Dr. Wm H. Kelley.

The Greenville County Medical Society was addressed by Dr. Bertram M. Bernheim of Johns Hopkins Medical School who chose as his subject **Peripheral Vascular Disease**. Following the meeting he talked informally to a group of doctors on socialized medicine, a subject upon which he is well informed.

The semi-annual meeting of the First

District Medical Association was held at Walterboro May 15. The following papers were read: **Postoperative Complications and Their Relief**, Dr. G. T. Tyler of Greenville; **Cardiac Neuroses**, Dr. O. B. Chamberlain of Charleston; **Remarks on Abdominal Surgery**, Dr. LeGrande Guerry of Columbia; **Medicine of the Immediate Future**, Dr. T. A. Pitts of Columbia, President-Elect of the South Carolina Medical Association. Dr. J. B. Johnson of St. George, President of the First District Medical Association presided.

The Newberry County Medical Society met on April 4 with Dr. W. L. Pressly of Due West as guest speaker.

At the annual meeting of the Bamberg Medical Association on April 10, Dr. H. G. Hiers of Bamberg was elected President; Dr. Luke T. Glenman of Denmark, Vice President; Dr. Jennings Cleckley of Bamberg, Secretary.

A joint meeting of the Chesterfield and Marlboro County Medical Societies was held in Cheraw, May 13. The officers of the State Association, Dr. George Truluck, President, Dr. T. A. Pitts, President-Elect, and Dr. J. P. Price, Secretary, were all present and gave informal talks. Several visitors from North Carolina were among the audience.

Dr. Isaac H. Grimbail of Greenville was elected President of the South Carolina Pediatric Society at the annual meeting May 17. The principal speaker at the meeting was Dr. T. Campbell Goodwin, Associate Professor of Pediatrics at Johns Hopkins Medical School who discusses various types of bone lesions in children brought about by scurvy and lead poisoning.

The Lexington County Medical Society was entertained by Dr. Karl Able and Dr. James Crosson. The guest speaker was unable to attend and the members enjoyed a social evening together.

WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

OFFICERS, COUNCILORS AND CHAIRMEN FOR 1941-42

President, Mrs. Richard M. Pollitzer, Greenville, S. C.

President-Elect, Mrs. P. M. Temples, Spartanburg, S. C.

1st Vice President, Mrs. J. W. Kitchen, Liberty, S. C.

2nd Vice President, Mrs. J. E. Orr, Seneca, S. C.

Recording Secretary, Mrs. David Adcock, Columbia, S. C.

Corresponding Secretary, Mrs. L. H. McCalla, Greenville, S. C.

Treasurer, Mrs. J. L. Sanders, Greenville, S. C.

Councilors

Mrs. E. C. Ridgell, Batesburg, S. C., District No. 2.

Mrs. J. R. Power, Abbeville, S. C., District No. 3.

Mrs. W. B. Furman, Easley, S. C., District No. 4.

Mrs. Frank Strait, Rock Hill, S. C., District No. 5.

Mrs. W. E. Mills, Sumter, S. C., District No. 6.

Chairmen

Student Loan Fund, Mrs. L. O. Mauldin, Greenville and Mrs. T. A. Pitts, Columbia.

Treasurer Student Loan Fund, Mrs. J. L. Bundy, Rock Hill.

Jane Todd Crawford Fund, Mrs. R. D. Hill, Pacolet Mills.

Legislative Chairman, Mrs. H. L. Timmons, Columbia.

Public Relations, Mrs. Emmett Madden, Columbia.

Hygeia, Mrs. D. O. Rhame, Clinton, S. C.

The Greenville County Medical Auxiliary was hostess to the State Medical Convention April 15th to 17th. The business meetings were

most inspiring. We were honored by having our National President, Mrs. V. E. Holcomb, as our guest. We hope each one of our visitors enjoyed the convention. Greenville was most happy to have you and is looking forward to the time when you will return.

The Greenville County Medical Auxiliary was happy to furnish transportation for the guests during the Tri-State Hospital convention for a beautiful garden tour.

Mrs. C. P. Corn, radio chairman for Greenville Auxiliary, arranged a very impressive program in honor of the doctors for Doctor's Day March 31. Mrs. LeRoy Wertz gave several beautiful vocal selections by her own accompaniment. Mrs. M. Nachman, local president, gave a eulogy on Marion Simms, M. D. Mrs. Corn gave a history of Doctor's Day and closed the program with a very fitting quotation.

The first executive board meeting of the year was held Friday, May 9, at the home of the president, Mrs. M. Nachman. Mrs. R. M. Pollitzer, State President, was honor guest and outlined the objectives for the year. The Greenville Auxiliary then outlined the year's work to correspond with the State Objectives.

The Greenville County Medical Auxiliary were hostesses at the St. Francis, Shriners' and General Hospitals on Hospital Day, May 12.

The Greenville County Auxiliary gave an informal tea to the graduating class of the General Hospital School of Nursing on Tuesday, May 13, at the home of Mrs. R. M. Pollitzer on Hillcrest Drive.

The April meeting of the Women's Auxiliary to the Spartanburg County Medical Association was held Tuesday afternoon with Mrs. S. J. Morrow at her home at Inman, with Mrs. C. J. Miller as joint hostess.

Mrs. P. M. Temples gave an interesting resume of the State meeting of the auxiliary in Greenville on April 16. Spartanburg has two state officers for the coming year: Mrs.

Temples, president-elect; and Mrs. R. D. Hill, chairman of the Jane Todd Crawford Memorial fund.

The following chairmen were appointed to serve during the coming club year: Student Loan Fund, Mrs. W. G. Morehouse and Mrs. H. L. Knowlton; public relations, Mrs. Morrow and Mrs. Miller; ways and means, Mrs. J. C. Josey; hygiene, Mrs. William T. Hendrix; membership, Mrs. Temples; historian, Mrs. Ruth Keller, Jane Todd Crawford Fund, Mrs. J. L. Jefferies; program, Mrs. D. C. Alford;

publicity, Mrs. Hill, hostess, Mrs. J. M. Fleming; personnel, Mrs. J. J. Lindsay; transportation, Mrs. P. A. Smith; bulletin, Mrs. E. B. Saye and Mrs. Joseph Allen.

Mrs. I. A. Phifer, president, was in the chair, and welcomed Mrs. Walcott Dennison, Mrs. E. M. Rylander, Mrs. O. J. Miller, and Mrs. Harold E. Sweet, wives of medical officers of Camp Croft, who were special guests of the afternoon.

After the program the hostesses entertained at a social hour serving a salad course.

FROM CHARLESTON NEWS AND COURIER

Forty-two men and three women were awarded the degree of doctor of medicine at commencement exercises last night in Memminger auditorium for the Medical College of the State of South Carolina.

Degrees of bachelor of science in pharmacy were awarded to two; thirty-one young women were graduated from the nursing school, and thirteen selected pupil nurses from the state hospital for the insane at Columbia received certificates as affiliates in the school of nursing. The degrees were presented by Dr. T. A. Pitts, president of the board of trustees.

Dr. Wyndham Bolling Blanton, associate professor of medicine at the Medical College of Virginia, at Richmond, advised the graduating doctors that "only character counts." Speaking on "The Bedside Manner," he said that although the day of the gold-headed cane, the gold ring and the impressive snuff box is gone, studied neatness, scrupulous cleanliness and tasteful dress "are the indispensable setting of the accepted bedside manner."

Advising that conversation is a valued ally, Dr. Blanton said that physicians are recompensed for a cheerful bedside manner.

PATIENTS WANT OPTIMIST

"Most of your patients, you will find, are in search of an optimist for a doctor," he said. Self-confidence of just the right flavor and degree is indispensable to the successful doctor, but he added that "the self-confidence I am urging upon you is the genuine article—the kind that springs from knowledge. There is no substitute for it. The man who plans to practice medicine on a high plane has got to work.

"Osler called work the master word in medicine. Our profession is a stern and exacting mistress. Now that you have wooed and won her, you no longer will be able to call your time your own. It is a hard and arduous role you have undertaken. The public knows this and will pity you, while at the same time, it often adds unnecessarily to the diffi-

culty of your job. There always has been plenty of hard work in medicine.

"Alexander Garden, here in Charleston, 150 years ago, found it so, describing himself and his associates as 'the busiest, most bustling, hurrying animals imaginable.'"

He declared that it is easy for most doctors to flourish and expand in the sunshine and in shower, but to few it is given to be at best effort in storm and shadow.

CULTIVATE EQUANIMITY

"We must try to cultivate a bearing and manner that can face with equal equanimity praise and blame," he said; "that is effective in any company; that it takes the gentle for granted and is not put out by the vulgar; that is natural, dignified, comforting and inspiring under all circumstances, be it when a life is snuffed out in death, or at the advent of a new life in birth; be it only with a patient afflicted with loquacity, or consumed with fear, or harassed by distrust, or lost in idolatry, or just disparagingly indifferent.

"Yes, your bedside manner must be a versatile accomplishment—equal to any occasion."

Dr. Blanton said there are situations wherein the "bedside manner" will have difficulty in flourishing, but added that the time for a young man to acquire these skills is while he is a student or an intern.

Assailing socialized medicine, the speaker said: "I do not know how far the New Deal will take us in the direction of state medicine, nor what will happen to many of our cherished traditions, but of one thing I am certain: you will have little use for the bedside manner if that plague of state medicine should ever descend upon us.

"Many of you shortly will find yourselves in military service of the country . . . there is a danger that . . . you may return to civil life with soured face and jaundiced eye. In either event, the military service has played havoc with the building stones out of which a polished bedside manner was to have been constructed."

THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

July, 1941

NUMBER 7

Rupture of Varicose Ulcer of Esophagus

Case Report

W. L. McILWAIN, M. D.

J. R. AND C. H. YOUNG, M. D.

J. M. FEDER, M. D.

ANDERSON, S. C.

W. B. H. male textile worker, age 44, was first seen by one of us (W. L. McI) at 4 p. m. April 5th, 1941. At that time he was threshing about in bed and begging for relief from an extremely agonizing abdominal pain.

Past Medical History: Essentially negative. No symptoms of gastro-intestinal disease.

Present Illness: Patient was an extremely heavy eater. Six hours before onset of present attack he ate six eggs, several biscuits and drank several cups of coffee. He had been a moderately heavy drinker for a number of years and during the morning of the date of present illness is reported to have drunk about a fourth of a pint of whiskey. About 3 p. m. he vomited a considerable amount of blood while in a filling station and immediately began having a moderate amount of pain in the lower posterior thoracic region. He walked home, a distance of about a quarter of a mile and upon his arrival there, vomited blood a second time. He went to bed complaining of increasing severity of pain with more or less localization in upper abdomen at this time.

Physical Examination: Skin cold and clammy, pulse 120, temperature 98. Heart sounds of good quality. Cyanosis not present. Abdomen showed board like rigidity and due to the excruciating pain satisfactory palpation could not be carried out.

Morphine gr. 1/4 and atrophine gr. 1/150

were given at 4:05 p. m. without any evidence of relief. At 4:35 p. m. morphine gr. 1/4 and hyoscine gr. 1/100 were given without influencing the pain. At 5 p. m. another dose of morphine gr. 1/4 was given and the patient was again visited at 6:45 p. m. At this time no relief from pain was found and cyanosis was marked. Patient was transferred to the service of Dr. J. R. Young at the Anderson County Hospital.

Diagnostic Impression: Ruptured Peptic Ulcer.

Examination on Admission: 8:30 p. m. April 5th, 1941. Temperature 100.2; pulse 100; B. P. 130/110. The patient appeared desperately ill. His color was a mixture of cyanosis and pallor. His breathing was shallow and his face depicted severe pain. There was extreme rigidity of the abdominal muscles and exquisite tenderness in the region of the epigastrium. The abdomen was silent on auscultation. Patient was given 1000 c. c. of 5% glucose solution in normal saline and morphine gr. 1/4 and atrophine gr. 1/100.

Laboratory examination:

Urinalysis:

Albumin 1 plus

Occasional pus cell.

Blood examination:

Erythrocytes: 4,000,000

Leucocytes: 9,000

Neutrophiles: 70%

Hemoglobin: 84% (Sahli)

Pre-Operative Appraisal: Rigidity of the abdomen and extreme pain presented difficulties that made a satisfactory physical examination impossible. We were of the opinion that the patient had experienced an abdominal catastrophe of some sort, probably a gross rupture of some hollow viscus or a vascular accident such as a mesenteric thrombosis. The unusual severity of the pain suggested some serious vascular accident rather than rupture of a hollow viscus. Decision was reached that an exploratory operation was indicated and that a spinal anesthesia would be the one of election under the circumstances. The amount of surgery necessary could not be predicted and it was felt that a satisfactory degree of relaxation would be necessary.

Report of Operation: Abdomen was opened by upper right rectus incision. No evidence of hemorrhage was found, nor was there many soiling. Palpation of stomach showed it to contain considerable fluid. While this manipulation was being carried out patient became considerably more cyanotic. (He was quite cyanotic when the operation began and oxygen was being continuously administered.) When no lesion was found in the upper abdomen the large and small bowel were carefully examined and no evidence of vascular accident was found. Hasty closure was done. During this closure the patient died of a progressive respiratory insult.

Report of Post Mortem: Autopsy was performed at 1 a. m. April 6th by Drs. J. R. Young and J. M. Feder at Anderson County Hospital. Consent for complete autopsy was not obtained. Consent was given for opening the chest cavity. Having failed to find to our complete satisfaction the cause of his death in his abdominal cavity the possibility of a coronary accident presented itself and we were anxious to explore this possibility. On opening the chest some 6 or 8 pints of greasy "pot liquor" looking material was found in the left pleural space practically filling the cavity. The lung was totally collapsed. All the fluid was removed from the chest and a ruptured esophagus looked for. The stomach was opened on its anterior

surface and the hand passed into the stomach. The index finger was passed up into the esophagus and immediately above the diaphragm a "blow out" of the esophagus was discovered. This rupture was much larger than the usual gastric or duodenal ruptured ulcer. The rupture was elongated in the vertical diameter of the esophagus and the forefinger could be brought out the opening while the hand was in the stomach. A piece of this tissue was removed for microscopic study and the post mortem incision closed.

Histopathological examination from area about rupture: There was a marked vascular thrombosis with moderate round cell infiltration. There were a number of large, pigment laden phagocytic cells scattered throughout.

Anatomical Diagnosis: Rupture of esophagus.

Microscopical Diagnosis: Thrombosis of esophageal varicosity.

Post Operative and Post Mortem Impressions:

(1) The large "blow out" in the lower end of the esophageal tube explained the symptoms of initial hemorrhage followed by increasingly excruciating pain.

(2) The size of the "blow out" with the resulting gross soiling of the pleural cavity explained our inability to relieve pain by any amount of morphine.

(3) When the stomach was lifted up and carefully examined during operation an additional large amount of stomach contents spilled out in the pleural cavity producing a profound respiratory insult that resulted in death.

(4) The microscopic picture of thrombosed esophageal vessels suggests that the ulcer which ruptured was in reality due to ischemia like a varicose ulcer of the leg.

Following operation before the post mortem examination we discussed the possibility of the spinal anesthesia being responsible for the death. It is our opinion that the spinal anesthesia was in no way concerned with the fatal outcome. When the patient was brought to the operating room there was a marked cyanosis present. We attributed this at the time to anoxemia due to involuntary inhibition of normal respiration and to the narcotizing ef-

fect of morphine. The pulse rate and blood pressure were 100 and 130-110 respectively. The patient was given only one c. c. of pontocain in the second lumbar space. Because of anoxemia, continuous oxygen inhalations were given throughout the operation. In spite of this respiration became increasingly worse and cyanosis more marked. There was not a dramatic drop in blood pressure, pallor and nausea—frequent vasomotor symptoms of spinal anesthesia. The clinical picture was

rather that of profound and increasing anoxemia. In retrospect the anoxemia is satisfactorily explained in a mechanical way. The rapid complete collapse of the left lung brought on by the pleural cavity becoming more or less filled with stomach contents completely abolished breathing on the left side. The accompanying shock and pain and narcosis further inhibited respiration and the result was death from a rapidly progressive anoxemia.

Georgia Medical Association's Proposed Plan For Giving Care to Rural Communities

GILBEART H. COLLINGS, JR.

CLEMSON, S. C.

(Senior, Emory University Medical School)*

I believe that many South Carolina physicians will be interested in knowing something of the Georgia Medical Association's plan to furnish medical care to rural communities.

It might be asked, "Why is there so much discussion at present about so-called 'socialized medicine?'" Obviously, judging from the popularity of discussion of this subject, the answer is simply this—part of society (and it is not a small part) has inadequate medical care. In the south this is especially evident in rural areas where there is a scarcity of physicians, hospitals, clinics, public health units, and nurses. In this paper the discussion will be limited to the scarcity of physicians.

According to the Bureau of Medical Economics, of the American Medical Association, for every 1100 persons one physician is necessary to supply them with adequate medical attention. Now, how many doctors do we have in the South? Surprisingly enough, when one reviews the statistics he finds that in that area of the United States south of the Potomac and Ohio Rivers, and westward including Arkansas, Texas, and Oklahoma, there is a

ratio of one physician to every 1106 persons. Theoretically, this is a sufficient number of physicians to care adequately for the southern population. Why then is it not? Because there is an unequal distribution of physicians in rural and urban areas. Because communication is better, hospitals are closer, and the population and life in general are more compact in urban areas, the urban areas need fewer doctors per unit of population than do rural communities, and yet they have more. This situation has long been apparent and many plans have, at various times, been proposed as remedies. Before outlining the Georgia plan let us consider some of the causes of this unsatisfactory medical situation.

First, the rural South, in general, is financially poor. For example, in the State of Georgia only forty per cent of the people are able to pay for medical service. Of the sixty per cent unable to pay for medical service a small number might be able to pay one-half of the costs of good medical care, or they might be able to pay \$12.00 to \$18.00 per year to a cooperative organization which would furnish them partial medical protection. However, the majority of this group of sixty per cent can-

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not afford even these amounts of medical care and must rely on charity.

In any given locality the number of physicians varies directly with the taxable value of property, and also with the per capita sales of that area. As a result the poor rural areas of the South have few physicians.

Second, there is more individual poverty than is commonly realized. In these days of installment buying, the average individual lives on his salary before he receives it, no matter whether his income is \$50.00 or \$5,000.00 per year. This is partially a result of buying things he needs, but too often it is a result of high pressure salesmanship which causes him, or more often his wife, to buy things he does not need. Perhaps what we need is more medical high pressure salesmanship. At any rate, a surprisingly large number of persons, regardless of their income, are unable to pay for medical services when needed.

Third, physicians in no small numbers are willing to locate in any community that really has a need for their services and can provide them with a fair living. The difficulty here is provision for that fair living.

Fourth, the responsibility for rendering good medical care is not, as is commonly assumed, the responsibility of the physicians alone. The community must make it possible for the doctor to render service. Herein lies the danger of socialism. The theory is beautiful, but it fails when put into practice. The medical profession's responsibility is to furnish a sufficient number of well trained doctors, and to advise the public in its medical undertakings. The securing of hospitals, sufficient hospital beds and equipment, the medical education of the laity, and cooperation with the medical profession are the responsibilities of the community and not of the physicians practicing in the community.

Fifth, the present national defense program has recently made bad distribution of physicians worse, partially by giving many physicians who were barely eking out a living in the rural areas an opportunity to increase their incomes by joining the medical corps; and partially by actually drafting a number of them for service in our armed forces.

Thus, it appears that if medical care is to be supplied to rural communities in the South, these rural communities must secure financial assistance from outside the community. It would appear that aid must come from the county, the state, or the federal governments. As regards the part to be played by the Federal Government, I quote from the report of the special session of the House of Delegates of the American Medical Association in 1938: "The role of the Federal Government should be principally that of giving financial and technical aid to the states in their development of sound programs through procedures largely of their own choice." As regards the states' own choice, there have been many and varied plans proposed in the form of legislative bills. For example, a bill to appropriate \$1,000.00 annually to each of the counties of Georgia for the medical education of one boy from each county, recently passed by the Georgia legislature, was vetoed by the governor. The idea behind this bill was the supposition that these medical graduates would go back to their home counties to practice medicine. However, as has already been pointed out, local conditions are such that most of these medical graduates would be unable to make a living in their home communities.

Thus we come to the so-called Georgia plan which has been proposed by the doctors of Georgia themselves. The plan has not yet been presented to the legislature, but it has attracted rather wide medical interest and discussion. It should be said that this plan is not advocated as a cure-all for all the ailments of southern medicine, nor for the ailments of southern rural medicine. It is merely an attempt to meet the need for more doctors in rural areas.

The Georgia plan is briefly as follows: A list would be compiled of the rural communities which are in need of doctors. Each year these communities would be offered as places of practice to young M. D.s who are graduates of the two Georgia medical schools, and preferably to graduates having one year of internship. The local or state government would furnish the selected young doctor with an office, a laboratory, and an automobile. They

would also guarantee him a certain minimum annual income. Young men agreeing to supply these rural needs would accept the positions for a period of two years, at the end of which time they would have three courses open to them:

1. To stay in the community indefinitely under the same agreement.

2. To return to hospital work as assistant resident physicians, in which event they would be much more valuable to the hospitals because of this experience.

3. To go elsewhere to practice medicine.

These "rural internships" would be under the supervision of the medical schools themselves, or of a designated nearby physician with a well established practice.

The rather obvious advantages of such a proposal are: First, it should supply a sufficient number of rural doctors as fast as the need arises.

Second, it does not involve the medical profession in the undesirable regimentation of state medicine, as do many of the plans originated by the lawmakers.

Third, it should provide excellent training in general practice for young doctors.

Fourth, it would be financially enticing to young men who have just graduated from medi-

cal school and who do not have sufficient reserve funds with which to equip an office. At the same time it would not be a difficult financial undertaking for the government, as in many cases all, and in most cases part of the guaranteed income would be met by the communities themselves.

The principal objection that might be advanced to this plan is the assumption that the number of medical graduates who would volunteer would be small. Based on the response of the seniors at the Medical College of Emory University, I can assure you that the reverse is true. The plan was presented to the seniors at Emory, and also to the seniors at the Georgia Medical College. A surprisingly large number of these men indicated that they would be only too glad to assume two years of rural practice under the conditions stated. I feel sure that a similar response would be secured from the seniors at the Medical College of South Carolina.

Governor Burnet Maybank has recently called attention to the seriousness of the medical situation in the rural areas of South Carolina, and it may be that some such plan as the Georgia plan might be worked out for this state. I sincerely believe that the benefits of such a plan, both to the state and to the young doctors, would be far in excess of the cost.

An Unusual Case

V. W. AND W. M. CARPENTER

GREENVILLE, S. C.

White male age forty—May 10, 1937. Complaint—for one week eyes painful, red, sensitive to light, loss of vision. History—never any serious illness. This affection followed a cold in the head. Operated for rectal fistula twenty years ago. Denies venereal infection.

Physical examination—Lungs, heart, abdomen, central nervous system, nasal sinuses negative. Tonsil hypertrophied and pillars congested, crypts contain caseous masses, gums and teeth normal. Temperature 99. Urine negative for albumen and sugar, two plus

cells — B. C. normal. Wasserman negative. Eyes—intense photophobia, blind and had to be led, oedema of the conjunctiva and deep ciliary zone of congestion, pupils contracted and immobile, aqueous positive, vision in both eyes light perception only.

Diagnosis—bilateral uveitis, etiology probably focal infection from tonsils. Atropine Sulphate one per cent drops did not dilate the pupils. Atropine Sulphate one per cent and adrenalin in a normal salt solution, subconjunctival dilated them partially. Vitreous

clouded by shower of fine dust. Sweats, foreign proteins, two per cent Atropine and intravenous calcium gluconate, hot packs, and Sulfanilamide for several days did not relieve the condition. Tonsils removed—very little improvement for several days. Prostate investigated by urologist and his report was "glands moderately enlarged and tender, milky yellow discharge obtained from urethra containing numerous pus cells and gram negative and positive intra-cellular diplococci." Prontosil one ampule three times daily was instituted and in four days the patient was discharged from the hospital, all symptoms subsided as by magic. In a few weeks he was given a moderate refractive correction with perfect vision for distance and near. The urologist discharged him as cured. The fundi were perfectly normal.

Discussion

The whole anterior vascular system of both eyes was involved. The pathology was not a

suppurative or plastic one and therefore we are not justified in visualizing the etiology as a metastasis. Organisms often find a resting place in the ocular tissue from the blood stream, but it is difficult to conceive of both eyes being simultaneously involved in identical fashion and degree and completely recovering after a bilateral metastatic infection. The conclusion then is that the ocular tissues resented the presence of some bacterial dissolution or the products of their metabolism and antibodies were produced to which the ocular tissues were sensitive. The question arises, shall we call this an allergic storm. Another conclusion is that we should never accept the statement of any individual about venereal infections, when we can resort to a laboratory to endorse or disprove our suspicions.

For a time this case looked desperate and after administering prontosil, the pathology disappeared like the sun bursting in noon day brilliance through the mist.

This case is not ultra scientific, but dramatic.

Dental Root Cyst With Complete Involvement of Antrum

ROWLAND F. ZEIGLER, JR., M. D.

SENECA, S. C.

The classification of cystic tumors of dental origin is still confusing. Even in the so-called simple classifications, that is:—

(1) Dentigerous Cysts (Follicular Cysts)

(2) Root Cysts (Radiculodental Cysts)

(3) Adamantinomas (Cystadenoma or Multilocular Cysts),

there is vast literature on their pathogenesis indicating that while the fundamental factors lie somewhere in disturbances of tooth development, details are not yet understood. Padgett¹ sums it up by saying that "maxillary tumors of dental origin (the odontomas) are a group of tumors caused by the mishaps at various stages of development of the original cells, both epithelial and mesenchymal, which make up the normal tooth and its surrounding mem-

branes. They are practically always benign in all characteristics except the adamantinomas which show local invasive tendencies." Clinically, in such a case as the one to be reported, it seems impossible to distinguish a dentigerous and a root cyst without histologic study. The author, however, after studying several classifications, believes this case is classified correctly. Regardless, this case is reported more from a standpoint of its anatomic and surgical interest rather than its cellular origin.

Briefly and generally, dental root cysts are slow-growing and are most commonly found in the upper incisor and pre-molar regions. Such cysts being found during the developmental stage of the tooth, it follows that young adolescents are the ones afflicted. An absence

of symptoms may, however, prevent discovery until late in life. They are practically never seen with the first dentition. Within such a cyst cavity, a brownish syrupy fluid is formed. As the cyst enlarges its cavity within the surrounding bone by a process of pressure atrophy, a slight smooth bulging of the normal contour of the jaw may be noticed, and this is usually the first evidence of its presence, unless discovered earlier and accidentally in dental X-rays. If pressure is made upon the mass, an "egg-shell" crackle sensation may be obtained because of the thinness of the over-lying, expanded bone, and there may be a fluctuating sensation on palpation. The mass may project through the absorbed jaw externally or into the palatal bone or into the antrum, pushing up its floor, but rarely opening into it as spontaneous fracture is not likely. If the alveolar border is expanded, there may be displacement of a tooth. In treating these cysts, a cure usually results if the cyst wall can be destroyed, and the affected or causative teeth removed. Failure to remove all the lining epithelium may result in a permanent discharging sinus or a recurrent tumor, perhaps solid. Hertzler² does not believe there are any really innocent root cysts in the upper jaw.

Report of Case

H. W., a negro girl, aged 14 years, 6 months prior to consultation, noticed that her front teeth were becoming loose. This was followed shortly by severe pains in her upper front teeth and in the region of their roots, and frontal headaches. The pains were aching in character and gradually increased in severity, but were not constant. There was no history of maxillary discomfort. A month later, the patient noticed that one of her upper front teeth was out of line and pointing inward. She denied any trauma to the mouth. For five months the pains continued but she did not seek advice until a month after the appearance of a "bulging" just below and a little to the left of her left nostril.

Examination showed a tall fairly well developed colored girl, who appeared very uncomfortable. There was a distinct mass just below the left lower angle of the nose. To

palpation, it was fluctuant, circumscribed, and slightly tender, but no crepitation or egg-shell crackle could be elicited. The mass, palpated with one finger behind the upper lip, gave the impression of a cystic body about the size of a small walnut. It was not movable and seemed fixed to the alveolus. The gums were healthy and the teeth all present, clean, and sound, but the upper left central incisor was retruded about 35 degrees. Both nasal passages were well open, but the left maxillary sinus was cloudy to transillumination. The roof of the mouth was normal. The temperature was 99 degrees F., the pulse rate 80 with regular rhythm, and the B. P. 120 systolic and 72 diastolic. There was a slight symmetrical enlargement of the thyroid gland. The rest of the general examination gave negative results.

With local 1% novocaine anesthesia, the mucosa was incised in the labio-gingival sulcus and the mass entered and opened with a mosquito forcep, and drained of a large amount of dark glairy mucoid fluid. Five weeks later, the patient returned presenting the same picture, and stating that the drainage into her mouth had stopped in a few days, and that the painful swelling had gradually reappeared. Drainage was again instituted and the patient instructed to return for complete removal when the mass reappeared. She returned 7 weeks later presenting the original clinical picture. With local infiltration and nerve blocks of novocaine, an incision three fourths inches long was made over the alveolar process at the labio-gingival sulcus a little to the left of the midline. The cyst wall was encountered and opened and a finger inserted into its cavity to determine its exact size and extent. The finger easily entered into the left maxillary sinus, encountering no bony or soft tissue resistance, and the antral roof could be felt under the orbit. The cyst wall was continuous throughout, filling and completely lining the antrum, and extending into the alveolar process of the maxilla and through it to protrude externally. (See figure 1). With some difficulty the cystic lining, a thick tough membrane, was separated and stripped out, and the entire area gently curetted. The entire bony cavity was then packed lightly with iodoform gauze, and the

incision left open. No attempt was made to give nasal drainage. Post-operatively, the patient was given 60 grains of sulfanilamide daily for 3 days, and the cavity irrigated daily with warm boric acid solution. Temperature did not exceed 102 degrees F. and was normal and remained so after 3 days. Irrigations were discontinued after one week, and the buccal opening allowed to close. Five weeks after the operation the fistula had closed, the patient was symptom free, and the left antrum clearly transilluminated. Five months post-operative, at the time of the illustrated X-rays, there have been no return of original signs or symptoms, excepting occasional frontal headaches. The patient is still being urged to have the displaced tooth extracted. A few days prior to these X-rays, she had for the first time since operation a small amount of glairy drainage into the mouth which stopped in 3 days and when last seen the wound was closed and firm again.



Figure 1.—Showing cystic cavity in alveolar process extending from midline to the left canine area, and enlargement of the left antrum with thinning of its walls.



Figure 2.—Intra-oral Radiograph.

Comment

This case in many ways is typical of dental root cysts, but is reported chiefly because of the size and extensiveness of the cyst in such a young patient. This cyst did not merely encroach upon the antrum, but completely filled it and "stretched" it, as was determined by digital examination and X-ray. Figure 1 clearly demonstrates the thinness of the antral wall throughout. Undoubtedly, this root cyst was nearer the maxillary sinus in its beginning and eroded into it and filled it (its pressure behind the tooth root causing retrusion of the tooth) before it manifest itself externally. Apparently this cyst was more rapid in growth than usual, since root cysts are practically unheard of with the first dentition. Antral fullness and pressure on tooth roots and nerves accounted for pain being the earliest symptoms. It is difficult to say whether external spontaneous fracture occurred or not. No bony resistance was encountered on entering the cystic cavity, but a markedly thinned shell of bone could have easily been destroyed in the original drainages with knife and clamp. Apparently there was spontaneous fracture internally to allow extension into the antrum. The operation for removing the cyst was essentially the "Kuster operation," except that no opening

had to be made in the canine fossa to enter the antrum. An opening was already present in this vicinity. Later, if necessary, that is if drainage should recur into the mouth and form a permanent fistula, the operation may be supplemented by an intranasal opening for permanent drainage of the antrum.

Conclusion

A case of dental root cyst with early complete involvement of the antrum is reported.

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Office of Publication: (In care of the Editor) -----
Subscription Price -----

Florence, S. C.
\$3.00 per Year

JULY, 1941

THE PROBLEM OF MEDICAL CARE IN SOUTH CAROLINA

The number of physicians actively engaged in the practice of medicine in South Carolina is such that any further reduction in the number may cause the people of the state to suffer for want of medical care—and this is particularly true of those areas which are primarily rural in character.

There is no hard and fast rule as to the number of physicians a given community or state may need but it has been estimated that it is necessary to have one physician to each 1100 of population to furnish adequate medical care.

According to the last census there are 1,899,804 people in South Carolina. Before the present national emergency arose there were 1404 physicians in the state and this number included all white and colored physicians, even those who were inactive. A conservative estimate would place the number of physicians who were carrying a full medical load at 1300. Thus we find that before the national emergency arose there was a ratio of 1:1460. A study recently completed by the council shows that the ratio at the present time is 1:1790.

Detailed study of representative counties will show that the shortage of physicians is more acute in the rural areas.

(The following figures are those of May 16, 1941.)

Greenville is the largest county in the state and the majority of people live in cities or smaller towns. The population is 136,580. The number of physicians in active practice 93. Ratio 1:1468. Number of physicians called in to service 10.

Florence County is both urban and rural with about half the people living in towns. Population 70,582. Physicians in active practice 45. Ratio 1:1567. Physicians in service 4.

Orangeburg County is more rural than urban. Population 41,011. Physicians in active practice 26. Ratio 1:1577. Number of physicians in service ?

Chesterfield, Lee, Horry, and Marion Counties are primarily rural counties.

Chesterfield County. Population 35,963. Physicians in active practice 12. Ratio 1:2997. Physicians in service 0.

Lee County. Population 24,908. Physicians in active practice 8. Ratio 1:3113. Physicians in service 2.

Horry County. Population 51,951. Physicians in active practice 12. Ratio 1:4329. Physicians in service 2.

Williamsburg County. Population 41,011. Physicians in active practice 16. Ratio 1:2734. Number of physicians in service 1.

South Carolina has never been backward in furnishing men for service of the armed forces,

and this is particularly true of medical men. But the welfare of the people of South Carolina demands that from now on the selection of physicians from this state for the Army or Navy must be made with extreme care and should be carried out only after a careful study of the local conditions and of the local community in which the physician works.

Summary of County Reports

County	Population	Phys.	Ratio
Greenville	136,580	93	1:1468
Florence	70,582	45	1:1567
Orangeburg	41,011	26	1:1577
Chesterfield	35,963	12	1:2977
Lee	24,908	8	1:3113
Horry	51,951	12	1:4329
Williamsburg	41,011	16	1:2734

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PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

Question: What effect do the sulfonamides have upon the milk of a nursing mother? Should the baby be temporarily weaned if the mother taking one of this group of drugs?

M. D.

Answer: There is nothing to indicate that the sulfonamides have either a depressing or stimulating affect upon the milk of a nursing mother. A number of studies have shown that these drugs are excreted through the mother's milk in a concentration which equals or frequently exceeds the concentration of the drug in the blood of the mother. In several instances in which the nursing mother was treated with sulfanilamide the infants were carefully observed but no ill effect was noted in any case. The largest amount of the drug excreted through the mother's milk was only 1.5% of the total dose given to the mother; thus if the mother is taking 60 to 80 grains a day the total amount received by the infant would be only .9 to 1.2 grain daily. It has been shown that the new-born infant tolerates well much larger amounts of these drugs. It is obvious that the administration of the sulfonamides to the nursing mother is of little or no value as a therapeutic measure for the infant, as it would be necessary to give tremendous doses to the mother in order to obtain an adequate dose for the child. There seems to be no necessity for weaning the baby while the mother is taking any of the sulfonamides.

J. I. W.

Epidemic Encephalitis

"Active Immunity: None.

Passive Immunity:

1. Exposures: None.

2. Treatment: From 50 cc. to 75 cc. of convalescent serum have been injected as a passive immune principle, but the available evidence does not support its use."

Erysipelas

"Active Immunity: A vaccine has been recommended for those who repeatedly contract the disease. It is of no practical value and the available evidence does not support its use.

Passive Immunity:

Exposures: There is no specific therapy. Exposures should be advised to wash their hands every time they come in contact with a patient.

Treatment: Sulfanilamide is now the treatment of choice. In giving this drug the objective is to get a proper concentration in the blood stream quickly and to maintain the concentration. This should be from 5 to 10 mgm. per cent for from 2 to 5 days depending upon the symptoms. Erysipelas antitoxin has been used as a passive immune principle, but there is no conclusive evidence that it aborts, lessens the attacks or stops the spread of the disease. There is no evidence that convalescent serum is of any value in this disease."

Epidemic Meningitis

"Treatment: Ideas vary and no one opinion can crystallize current thoughts. Specific antiserums, specific antitoxins and sulfanilamide are used.

(a) In two contagious hospitals the patients are treated by giving a continuous slow intravenous drip of from 100,000 to 150,000 units of meningococcic antitoxin in 1000 cc. saline to which 1 cc. of 1:1000 adrenalin has been added. The spinal fluid findings and the condition of the patient determine whether further therapy is indicated. Other physicians use antimeningococcic serum intravenously and report equally good results. One member of the Committee uses from 10 to 30 cc. of antimeningococcic serum intrathecally, the amount and frequency depending upon symptoms and the spinal fluid pressure.

(b) Sulfanilamide is used. The drug has

been given intraspinally, although the Committee feels that it can be injected or given by mouth in all instances. One member uses sulfanilamide and meningococcic antiserum only if the patient does not respond to the drug.

(c) The practice in one contagious disease hospital is to use antitoxin as noted above combined with sulfanilamide; never to give any therapy intrathecally; never to disturb the hydrostatics of the spinal fluid and to puncture only for diagnosis. Others combine the use of antiserum and sulfanilamide. **NOTE:** Watch for relapses. If you use antiserum intrathecally be careful not to mistake serum sickness for a relapse. This condition may give all the signs of a meningeal irritation.

The treatment as outlined above may be varied to suit the circumstances."

Epidemic Parotitis

Passive Immunity:

1. Exposures: From 6 cc. to 10 cc. of convalescent serum have been given intramuscularly, but available evidence is insufficient to support its use.

2. Treatment: Convalescent serum injected intramuscularly to prevent complications has been used in doses of from 50 to 100 cc. There is no definite proof that it will prevent complications."

Gas Gangrene

Prophylaxis: Many physicians give a combination of tetanus and gas gangrene antitoxin after injuries contaminated with street dirt, etc. One prophylactic dose is injected intramuscularly. If the exposure is massive, the dose should be repeated in 5-7 days.

Treatment: This condition may be caused by several anaerobes. The organisms cannot be differentiated quickly enough to use a monovalent serum. Consequently polyvalent antitoxins are used. These contain a certain unit value of antitoxin against the more common organisms. The patient is given from 1 to 4 vials of the polyvalent antitoxin, depending upon his toxicity; the dose is repeated every 6 to 12 hours until the toxicity has abated. Some physicians inject a few vials intramuscularly in the region of the wound. When the patient is becoming better, the practice has been to give a sustaining dose subcutaneously. The

evidence is not clear as to the efficiency of this biological, but the seriousness of the infection justifies the use of an agent whose value may not be precisely established. Some clinicians employ X-rays. Sulfanilamide should be tried in all cases."

Pertussis

Active Immunity: The materials used are as follows: (1) Sauer's vaccine (8 to 10 cc. of vaccine standardized to ten billion organisms per cc.). One cc. is injected under the skin in the deltoid area of each arm, 1.5 to 2 cc. in the biceps area of each arm and 1.5 to 2 cc. in the triceps area of each arm, at weekly intervals. Recently Sauer has introduced a double strength vaccine (20 billion per cc.). Three single injections (1.0, 1.5, and 2 cc.), the total containing 80 to 100 billion organisms are given at weekly intervals in the areas noted above. There may be local reactions following these injections. Such vaccines are stated to be of value only when used well in advance of exposure. It is probably useless for immediate protection. The precise effectiveness of this vaccine is not known, since immunity is never absolute and its duration is uncertain. Nevertheless, the Committee favors a continued trial. (2) Old-fashioned vaccine; supplanted by Sauer's vaccine—not of proven value. (3) Krueger's endo-antigen: 1.0 cc., then 1.5 cc. subcutaneously every other day for six doses. It is not of proven value.

Passive Immunity:

Exposures: The possible production of adequate immunity takes so long that there is little or no purpose in giving vaccines after known exposure. Some writers, however, are convinced that definite value results if vaccine is given every other day after exposure. Convalescent serum, 10 to 20 cc., injected intramuscularly, has been recommended, but the available evidence does not conclusively indicate its value.

Treatment: (a) From 35 cc. to 50 cc. of convalescent serum have been used intramuscularly. The value of such treatment has been demonstrated. (b) Blood serum obtained from adults hyperimmunized with pertussis vaccine. This agent is not generally available to the practitioner and is still under experimental investigation.

MEDICAL SUMMARIES

At the request of the Editor Dr. Roe E. Remington has prepared a series of articles dealing with the various vitamins which will appear in this and subsequent issues of the Journal. Vitamins have come to play such a large part in the mind and speech of the public at large that physicians must of necessity have the latest information available. Dr. Remington is in a position to give this information and his articles should be of real value to every physician in practice.

THE VITAMINS

Roe E. Remington, Ph.D.

Charleston, S. C.

Although it has been known for approximately 200 years that a diet of fresh fruits and vegetables would cure scurvy, and it has been almost 60 years since Takaki showed that beri-beri could be eradicated in the Japanese navy by substituting a more varied diet for rice and fish, the actual recognition that many foods contain the merest traces of certain organic substances, which, despite their minute quantity are absolutely essential to the well-being of man and most animals, is a product of our own times. In fact, with the ever increasing momentum in vitamin research of the past twenty years, we have now reached a point where many competent workers and clinicians feel that vitamin deficiencies of one kind or another and in greater or less degree, play a greater part in the incidence of human ills than do the germs of disease themselves. We are now on the threshold of an era of enthusiastic research into nutritional deficiencies which will rival that for bacilli following their discovery by Paster, when some zealots taught that every malady must have its germ, and it only remained to recognize it and learn how to deal with it.

Particularly interesting and important is the recent view of many leaders in the nutritional field, that due to the large use of sugar, white flour, and other milled cereals as the principle sources of energy in the diets of people in all income brackets, both city and country, a large fraction of our population is not receiving enough of some of the essential vitamins to maintain full health and vigor. There is a range of deficiency between that which will

be revealed by clearly recognized syndromes of disease such as pellagra, beri-beri, rickets or scurvy, and what has been termed "buoyant health." In this range persons may not feel ill enough to consult a physician, or if they do may not be able to present a sufficiently clean-cut symptomatology for diagnosis. At present the laboratory is not of much assistance to us in detecting such sub-clinical deficiencies, although some tests on blood and urine are available, and undoubtedly will be made workable, with sufficient data for their interpretation, within the next few years. Perhaps for this reason, and also on account of the now ready availability of vitamin preparations and the wide publicity given them, the sale of vitamin pills and capsules has reached a tremendous volume. Of the millions of dollars spent in self-medication of this form, certainly a high percentage is wasted as not being needed or expended in the wrong direction. Since no harmful effects of over-dosage of most of the vitamins have been shown, the main loss is the financial one. Unfortunately those most in need of such products are usually those of low income and limited expenditure for food, who are least able to obtain them.

Of the fifteen or more vitamins now known to exist, some nine are available in pure, crystalline, synthetic form, and some, notably ascorbic acid, thiamin, nicotinic acid, and riboflavin, are finding wide acceptance by the profession in the treatment of disease. The dermatitis and stomatitis of pellagra are immediately benefitted by nicotinic acid, but we must not forget that the diet that produced the pellagra was not deficient in nicotinic acid alone, but also in most or all of the other factors, known and unknown, which go to make up what used to be called the Vitamin B Complex. These powerful synthetics, in fairly large doses, are indispensable in acute deficiencies, but for the long time handling of such conditions a correction of diet is the only safe procedure, at least until we are assured

that all the essential vitamins in food are recognized and medicinal preparations are available that contain all of them in adequate amount. The physician of today must of necessity know more about foods and their uses in the body than has been taught in our medical schools in the past.

The most widely used energy foods are white flour and milled rice, from both of which most of the vitamins have been discarded in the germ and bran. The appearance on the market of "enriched flour," to which thiamin, nicotinic acid, and perhaps riboflavin, have been added to replace that removed by the milling process, is a step in the right direction. It may lull us with a false sense of security unless we realize that these are not the only

vitamins which have been removed in making white flour; unless we take steps to change the habitual diet in the direction of including other unrefined sources of important vitamins. As and if we control pellagra with pure nicotinic acid, spastic neuritis with thiamin, and cheilitis with pure riboflavin, we shall without doubt discover new trains of symptoms which were masked or overshadowed by those we knew how to recognize, and for which we shall have to continue in the variety and multiplicity of the synthetics we use as new ones are discovered. With regard to the vitamins of the B complex group, deficiencies are always multiple.

Note: Individual vitamins will be taken up in greater detail in succeeding discussions.

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AROUND THE STATE

Effort will be made to secure and publish news concerning the activities of individual physicians, and of the various medical societies of the state. Members of the Association, and especially secretaries of county societies, are urged to send in news items to the Editor.



Dr. F. H. McLeod

Dr. F. H. McLeod of Florence was awarded the American Legion plaque for distinguished service at the annual convention of that organization in Myrtle Beach on June 16th. The citation for the award listed Dr. McLeod's many honors which have been bestowed by various medical bodies and mentioned particularly his part in the growth of the McLeod Infirmary and the Florence-Darlington Tuberculosis Sanatorium. The many friends of Dr. McLeod join with the Journal in extending congratulations on this well merited recognition for an outstanding man of medicine.

Deaths

Dr. Vincent Bell of Greenville, died June 12 in Baltimore, where he was undergoing treatment in a hospital following an illness of several months. Dr. Bell had practiced medicine in Greenville for fifteen years and is survived by his wife and one daughter.

Dr. J. F. Williams of Roebuck, died June 10th at his home. A native of Pickens County,

he had practiced medicine at Roebuck for forty-two years.

Medical School Commencement

Forty-two men and three women were awarded degrees of Doctor of Medicine at the commencement exercises in Charleston, June 5th. Dr. T. A. Pitts, President of the Board of Trustees, presented the diplomas.

Dr. Wyndham Bolling Blanton, Associate Professor of Medicine at the Medical College of Virginia, delivered a strong and inspiring address on *The Bedside Manner*.

First honors in the School of Medicine went to Raymond Kirby O'Cain of Cordova and second honors to Norman Douglas Ellis, Jr. of Nartin and Pearce Bailey of New York, who were tied.

The graduates with their home addresses and their location for the coming year are as follows:

CLASS OF 1941

Name—Interning—Home Address

Pearce Bailey, M. D., Roper Hospital, Charleston, S. C., New York, N. Y.

Leon Banov, Jr., M. D., Sinai Hospital, Baltimore, Md., Charleston, S. C.

E. R. Barber, M. D., Cooper Hospital, Camden, N. J., Clio, S. C.

A. J. Baroody, M. D., Roper Hospital, Charleston, S. C., Timmons ville, S. C.

W. S. Brockington, M. D., Roper Hospital, Charleston, S. C., Florence, S. C.

Patricia A. Carter, M. D., Misericordia Hospital, Phila., Pa., Charleston, S. C.

R. R. Coleman, M. D., Grady Hospital, Atlanta, Ga., Charleston, S. C.

R. A. Conard, Jr., M. D., U. S. Navy, Columbia, S. C.

G. P. Cone, M. D., Baroness Erlanger, Cattanooga, Tenn., Williston, S. C.

L. S. Constine, M. D., San Francisco City & Co., Calif., San Francisco, Calif.

P. S. Cromer, M. D., Roper Hospital, Charleston, S. C., Charleston, S. C.

C. T. DuRant, M. D., Columbia Hospital, Columbia, S. C., Elliott, S. C.

N. D. Ellis, Jr., M. D., Columbia Hospital, Columbia, S. C., Martin, S. C.

E. W. Fisher, M. D., Watts Hospital, Durham, N. C., Bushnell, N. C.

H. H. Fouche, M. D., Roper Hospital Charleston, S. C., Columbia, S. C.

E. F. Hamer, M. D., City Memorial, Winston-Salem, N. C., McColl, S. C.

W. M. Hart, M. D., Louisville City, Louisville, Ky., York, S. C.

C. H. Haynsworth, M. D., Emergency Hospital, Washington, D. C., Greenville, S. C.

H. L. Holley, M. D., U. S. Public Health Service, Norfolk, Va., Greenville, S. C.

M. B. Hook, M. D., Maryland General, Baltimore, Md., Columbia, S. C.

J. H. Jameson, M. D., Greenville General, Greenville, S. C., Easley, S. C.

P. F. LaBorde, M. D., U. S. Navy, Columbia, S. C.

W. R. LaRoche, Jr., M. D., Columbia Hospital, Columbia, S. C., Charleston, S. C.

J. B. Martin, M. D., Roper Hospital, Charleston, S. C., Newberry, S. C.

L. E. Mays, M. D., Greenville General, Greenville, S. C., Fair Play, S. C.

W. T. MacLauchlin, M. D., Garfield Memorial, Washington, D. C., Chester, S. C.

R. K. O'Cain, M. D., Roper Hospital, Charleston, S. C., Cordova, S. C.

Kathleen A. Riley, M. D., Garfield Memorial, Washington, D. C., Florence, S. C.

D. P. Reese, M. D., Roper Hospital, Charleston, S. C., Florence, S. C.

G. V. Rosenberg, M. D., Roper Hospital, Charleston, S. C., Abbeville, S. C.

W. M. Ross, M. D., Providence Hospital, Washington, D. C., Dillon, S. C.

Margaret L. Sampson, M. D., Garfield Memorial, Washington, D. C., Columbia, S. C.

Theodore Salter, M. D., James Walker Memorial, Wilmington, N. C., Stacy, N. C.

S. H. Sandifer, M. D., Station Hospital, Ft. Sam Houston, San Antonio, Texas, Lowrys, S. C.

G. W. Scurry, M. D., Columbia Hospital, Columbia, S. C., Chappells, S. C.

T. K. Slaughter, M. D., Duval Co. Hospital, Jacksonville, Fla., Wildwood, Fla.

J. Q. Simmons, Jr., M. D., Not yet placed, Audubon, N. J.

Mack Simmons, M. D., William Beaumont Hospital, El Paso, Texas, Chapel Hill, N. C.

C. C. Smith, M. D., Union Memorial, Baltimore, Md., Charleston, S. C.

I. H. Steinberg, M. D., New Britain General, New Britain, Conn., Northampton, Mass.

P. K. Switzer, M. D., Gallenger Municipal Hospital, Washington, D. C., Union, S. C.

W. H. Thames, M. D., Greenville General, Greenville, S. C., Lake City, S. C.

W. P. Turner, M. D., Greenville General, Greenville, S. C., Greenwood, S. C.

F. T. Wallace, M. D., Methodist Hospital, Indianapolis, Indiana, Chester, S. C.

W. A. Wallace, M. D., Orange Memorial, Orange, N. J., Spartanburg, S. C.

Society Meetings

At the June meeting of the Kershaw Society Dr. Graham Reid of Charlotte gave a paper on **The Medical Management of Peptic Ulcer.**

At a well attended meeting of the Florence County Medical Society Dr. Halsey Barker, Assistant Dean of Johns Hopkins School, Baltimore, spoke on **The Use and Abuse of the Sulfonamides.**

At the June meeting of Pickens County Medical Society there was no guest speaker but those present had a lively discussion concerning interesting cases which were presented by the members. The Society voted to suspend meetings for the summer.

At the regular meeting on May 27, of the Medical Society of S. C. the Society passed a resolution concerning the indiscriminate dispensing of certain dangerous drugs.

The Scientific Program was in charge of members of the Staff of the U. S. Naval Hospital, at the Charleston Navy Yard. Three papers were presented: **Duties of a Naval Medical Officer**, by Commander J. J. O'Connor, M. C., U. S. Navy, **Ophthalmological Problems in the Naval Service**, by Lieut. R. C. Boyden, M. C., and **Venereal Diseases in the Navy**, by Lieut. K. H. Smith, M. C.

At the meeting on June 10, several Staff Members from the new Stark Hospital were guests, but took no part in the program.

The Scientific Program was: **Mechanics of Functional Disorders**, by Dr. O. B. Chamberlain; **Analgesia in Obstetrics**, by Dr. A. L. Rivers.

At the meeting of the Kershaw County Medical Society in May, Dr. Jas. T. Green of Columbia was the guest speaker and his subject, **Types and Principles of Internal Fixation.**

A meeting of the Greenville County Medi-

cal Society was held at the Ottaray Hotel on June 2nd.

Dr. Paul Ringer, President of the Southern Medical Association, was the guest speaker and gave a most interesting talk on **Medical Jurisprudence**.

Dr. Joe Crosland was the local speaker and reported some interesting cases of Frohlich's syndrome treated with thyroid and Antuitrin S.

The Edisto Medical Society met at 2 P. M., May 28th, in Orangeburg. The guest speaker was Dr. L. P. Thackston who presented an interesting paper on **Sulfanilamide and Allied Drugs**. The doctors at the meeting held an informal discussion on the paper.

The Second District Meeting will be held in Batesburg on July 31, 1941.

News Items

The following extract from a letter from Dr. George Truluck, President of the Association, regarding his trip to the meeting of the A. M. A. in Cleveland:

"South Carolina had a fair number of doctors present; I lost some of the bulletins, so I have forgotten the exact number there, but we had a fair representation and it was a grand meeting, well attended, programs were good and exhibits fine.

"Our party from Orangeburg had an excellent trip. We left here Sunday a. m. going by way of Lexington, Kentucky and arriving in Cleveland about four p. m. Monday. We left Cleveland Friday p. m. and went by way of Niagara, Harrisburg, Pa., Gettysburg, Skyland Drive, Va., LuRay Cavern and on back to South Carolina, arriving Sunday p. m. about seven o'clock. Dr. and Mrs. Whetsell accompanied my wife and me on the trip."

Dr. Tom Pitts unable to attend the A. M. A. Convention in Cleveland as Delegate from this state and Dr. J. T. Quattlebaum of Columbia, alternate, serving in his stead.

The following doctors were appointed as the Advisory Council of the Women's Auxiliary: Dr. Robert Wilson, Charleston; Dr. C. C.

Ariail, Greenville; Dr. Frank Strait, Rock Hill; Dr. William Weston, Jr., Columbia; Dr. Julian Price, Florence.

Dr. C. O. Bates, Greenville surgeon, has been named president of the Association of Surgeons of the Southern Railway system for the ensuing year.

The following from Dr. J. H. (Shorty) Pearce who is now located at the U. S. Naval Air Station in Jacksonville:

"I have checked over the 'rooster' and find that I'm alone, a stranger in a foreign land. Not one South Carolinian here but myself. I'm glad to report that I have just been uped a notch, to Lt. Senior Grade, and it dates back to February, '41, so I'll get some back pay—which makes me mad—you know."

Dr. W. T. Brockman of Greenville was elected a member of City Council in the June 10 municipal primary.

Dr. S. Glenn Love, Rock Hill surgeon has been elected as Commander of Frank Roach, American Legion Post.

The announcement has been made of the engagement of Miss Dora Jones Dunlap and Dr. Frank P. Gaston, both of Rock Hill.

Dr. J. W. Brunson of Camden, is now located at Fort Benning, Ga.

Dr. R. P. Jeanes formerly of Easley, is now located at Camp Forrest, Tennessee.

Dr. J. Hampton Hoch was appointed Editor of the Bulletin of the S. C. Academy of Science.

Dr. F. Webb Griffith of Asheville, North Carolina has assumed the presidency of the N. C. State Medical Society. Dr. Donald Cobb of Greensboro was chosen president-elect and Dr. Roscoe D. McMillan of Red Springs, secretary-treasurer.

A letter from the American Bureau for Medical Aid to China stressing the great need of medical textbooks and journals in the new and struggling libraries in China. Any physician having copies of standard medical textbooks and standard journals which they can readily spare are asked to send them to the Bureau headquarters at 1790 Broadway, New York City. They should be sent book-post and marked "Medical Textbooks."

Dr. Joseph A. Dillard of Columbia was the victim of a minor robbery when several medi-

cal instruments were stolen from his automobile on Saturday night. He was more fortunate than most physicians who suffer the same experience in that the police recovered the stolen property.

Dr. C. N. Wyatt of Greenville, Captain in the Medical Reserve Corps, was ordered to report at Camp Blanding, Florida, the last of June.

Dr. Horace Whitworth of Greenville, Lieut. in the Medical Reserve Corps, has been ordered to report for duty at Camp Blanding, Florida.

Dr. L. P. Thackston attended the American Urological Association Convention in Cleveland, Ohio.

Dr. H. M. Eargle is attending the New York Post-Graduate Medical School for two weeks.

Dr. Martin D. Young has been appointed director of the Malaria Research Laboratory of the United States Public Health Service at the State Hospital in Columbia.

Dr. C. P. Wallace has just returned from

New York where he and Mrs. Wallace attended a missionary conference. Mrs. Wallace is still there.

Dr. E. W. Masters will go into service of the United States Army June 29, 1941. He will be stationed at Fort Jackson.

Dr. and Mrs. James Heyward Gibbes announced the marriage of their daughter, Eugenia Salley, to Lieut. Robert Lane McCrady June 10, 1941.

Mrs. H. J. Thompson of Cope announced the marriage of her daughter, Carrie Rebecca, to Dr. Leonidas Cary Davis of Columbia June 4, 1941.

Dr. R. S. Plenge who is finishing her internship at the Columbia Hospital is going to Dallas, Texas June 30, to do public health work.

Dr. F. P. Coleman attended a meeting of the American Chest Surgeons in Toronto, Can. from June 9 to June 12.

Dr. Graham Shaw will leave Columbia June 15, to enter the Coast Artillery at Fort Davis, Holly Hill, N. C.

For the local Treatment of Acute Anterior Urethritis

(DUE TO NEISSERIA GONORRHEAE)

SILVER PICRATE*
Wyeth

A complete technique of treatment and literature will be sent upon request

*Silver Picrate is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

Silver Picrate, Wyeth, has a convincing record of effectiveness as a local treatment for acute anterior urethritis caused by *Neisseria gonorrhoeae*.¹ An aqueous solution (0.5 percent) of silver picrate or water-soluble jelly (0.5 percent) are employed in the treatment.

1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph., Gon. & Ven. Dis.*, 23, 201 (March), 1939.

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Dr. F. H. McLeod, Florence Surgeon, received the American Legion's distinguished service award for 1941 at the Legion's state convention at Myrtle Beach June 16.

Dr. A. T. Moore of Moore-Greene Clinic underwent a minor operation at the Columbia hospital last week.

Dr. John Timmons who has just completed his internship at Ford's Hospital in Detroit is spending his vacation in Columbia. He will soon leave for South America where he is to locate.

Dr. William M. Fox, assistant physician at South Carolina State hospital, will report for duty June 15 at the Army Medical Center, Washington, D. C.

CHARLESTON NEWS AND COURIER (JUNE 9)

A sailor and a civilian pitched into each other in earnest when they met and argued Saturday night at 138 Market street. Before bystanders could intervene, the sailor suffered a severe cut on his neck and the civilian a cut on one of his fingers. Separated, both decided to go to Roper hospital's emergency room for treatment.

The civilian, listed at police headquarters as Floyd Turner, of 149 Market street, sat down in the admitting room to await treatment by an intern. In a few minutes, the sailor, listed as Leonard W. Parker, of the United States destroyer Swanson, was brought to the hospital in a taxi. The wound in his neck was covered by a piece of ice.

In the hospital's admitting room, the two men resumed their fight. In the tussle they smashed a typewriter table, dumped a typewriter on the floor and frightened goose bumps on an attendant, who ran out of the room immediately and telephoned police headquarters. An intern armed himself with a baseball bat, but used it only to add emphasis to his words of mediation.

Before any more bodily damage could be done to either participant, Detectives Herman R. Berkman and Edward P. Wyndham and several policemen arrived. The sailor received treatment on one side of the hospital, the civilian was treated on the other side.

SOUTH CAROLINA PHYSICIANS AT FORT JACKSON

(Pictures on opposite page)

Major Orlando B. Mayer (Left upper)

Born—Newberry, S. C.

School—Newberry College and Western Reserve University Medical School, Cleveland

Office in Columbia, S. C., when called to duty at Fort Jackson March 5, 1941

Present Assignment—Assistant Chief of Medical Service at Station Hospital

Major Charles Hardy Fair (Right upper)

Born—Warrenton, Va.

Schools—George Washington University

Office in Greenville, S. C., before reporting for duty here last October

Present Assignment—Chief of Surgical Service

Captain Robert Hayes Driscoll (Left center)

Born—Pittsburgh

School—University of Pittsburgh (College and medical training)

Office in Newberry, S. C., before reporting for duty at Fort Jackson January 1, 1941

Present Assignment—Chief of communicable diseases at Station Hospital

First Lieutenant Keith F. Sanders (Right center)

Born—Charleston

Schools—The Citadel—Medical College of South Carolina

Office in Kingstree, S. C., before reporting for duty at Camp Shelby, Mississippi on January 15. Reported for duty here April 15

Present Assignment—Urological service at Station Hospital

First Lieutenant Lebby B. King (Left lower)

Born—Charleston, S. C.

Schools—College of Charleston and Medical School of the State of South Carolina

Office in Lake City, S. C., before reporting for duty at Fort Jackson January 5

Present Assignment—Ear, nose and throat service at Station Hospital

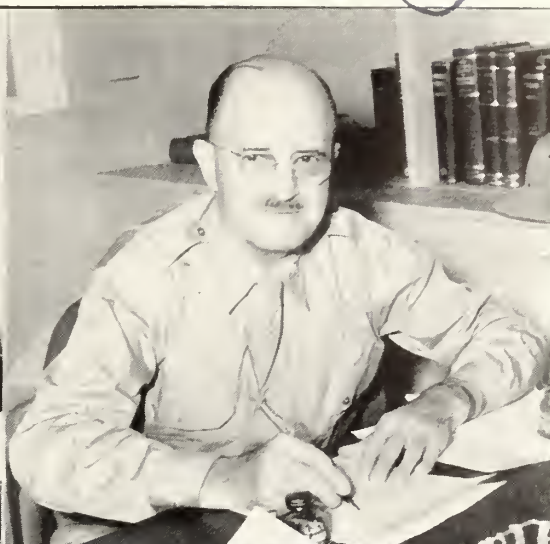
First Lieutenant George G. Durst (Right lower)

Born—Greenwood, S. C.

Schools—Clemson College, taught chemistry at South Carolina Medical College, year of graduate work at University of Chicago. Graduate of South Carolina Medical College

Office in Greenwood, S. C., before reporting for duty at Fort Jackson

Present Assignment—Chief of out-patient clinic



Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

Nov. 15, 1940

Case of Dr. W. H. Kelley

ABSTRACT NO. 425 (65209)

Student E. R. Barber (presenting):

History: A 55 year old white man admitted on 2-2-40 with chief complaint of "headache" which began as dull, constant, frontal headache in July, 1939. Also noted that his vision was growing progressively worse and by Aug., 1939 he could not see to walk around the house. Patient had an attack of unconsciousness 2 years ago and a similar attack 5 years prior to present illness. No blindness at this time. Mind began to wander during months before admission and patient often incoherent. He lost 40-50 lbs. during these 7 months.

Patient was kicked over left eye by a horse about 30 years ago.

Physical: T—98 P—66 R—20 BP—90/60. Examination revealed a fairly well nourished white man, not acutely ill. Old scar and depression in left supraorbital region. Dryness and scaling of skin of forearms and over deltoids. Left eye: aphakic. No light perception. Pupil irregular. Eye turns in. Old scar on cornea. Fundus shows pale white atrophic nerve. Right eye: Pupil reacted sluggishly to L and A. Fundus neg. except for pale white atrophic nerve. No edema in either eye. Temporal hemianopsia, rt. No tremor or deviation of tongue. Some redness at tip and margins. Taste sensation impaired. Cannot distinguish the odor of camphor, peppermint, ether or alcohol. All teeth out. Throat negative. Thyroid slightly palpable, soft. Lungs clear. Heart not enlarged. Sounds distant; rate and rhythm slow and regular, but pulse rather weak. Abdomen not remarkable. No pathological reflexes.

Laboratory:

Urinalyses essentially negative.

Sp. Gr. 1.006 2-5-40
1.003 2-12-40
1.002 2-27-40
1.022 3-28-40

Blood 2-3-40:

Hb. 10.5 gms.
WBC 5,925
RBC 5.05
Lymphs 40.5%
Polys 40%
Mono. 17%

Blood Kolmer and Kline Neg.

B. M. R. 2-12-40 29%

B. M. R. 3-18-40 24%

4-8-40 Blood Sugar-Fasting: 79 gms.

2-8-40 Blood cholesterol: 173 mgs.

Spinal Fluid 3-9-40:

Fluid came out very slowly—unable to obtain pressure. Cells 115; 64% polys; 36% lymphs; globulin 2 plus, sugar 1 plus, clear. 4-3-40 pressure 150; clear; cells 206; 96% lymphs; globulin and sugar 1 plus; Queckenstedt normal.

Course: Patient incoherent and disoriented much of the time. Continued to complain of headache and was very drowsy. Was unconscious for several hours on 3-12-40. Temp. subnormal, ranging around 97 and 98. Pulse became rapid and weak terminally with rapid, shallow respirations and marked cyanosis. Expired at 11:30 A. M. on 4-24-40.

Dr. Kelley (conducting): Mr. W. A. Wallace, do you remember this patient and what conclusions were reached when he was presented in medical clinic?

Student Wallace: Yes, I do. At that time he was presented as a case of hypothyroidism. This conclusion was reached on the basis of his drowsiness, spade hands, falling hair, expression, slow pulse, low blood pressure and basal metabolic rate, and his edematous, dry, scaly skin.

The presence of eye symptoms and the disturbance in the olfactory system also led to the consideration of a space consuming mass within the cranial cavity. Among the types of tumors to be considered are a chromophobe adenoma of the pituitary and a meningioma of the frontal region probably located in the olfactory groove. Either of these tumors might press on the optic chiasma and olfactory nerves. The former would also give rise to a hypophyseal cachexia and the symptoms of hypothyroidism.

Dr. Kelley: What eye signs do you consider significant?

Student Wallace: The progressive dimness of vision, hemianopsia, and optic atrophy can all be attributed to a continued increased intracranial pressure. The turning in of the eye is indicative of involvement of the 6th nerve.

Other signs that might be ascribed to damage of the pituitary body are the marked loss in weight and incoherence.

The low voltage and delayed A-V conduction in the electrocardiographic record point to a thyroid heart.

Dr. Kelley: Mr. F. T. Wallace, is there anything else that you would look for as suggestive of pituitary damage?

Student Wallace: Well, with extensive damage

the teeth fall out; this patient was edentulous but I do not know for what reason.

I think X-ray studies of the pituitary region would be helpful. A ballooning of the sella turcica would be present in an adenoma and there are other changes characteristic of other varieties of tumor in this region.

Dr. Kelley: Can you name any of the pituitary hormones that might be concerned?

Student Wallace: The thyrotrophic and diabotogenic factors were apparently concerned as well as Prolan A and B. One would expect infantilism of genitalia, acromegaly and premature aging from the loss of Prolan. I believe this patient had testicular atrophy, but his age may make this insignificant. Lack of the adrenotrophic influence could be responsible for the low blood pressure, but a hypothyroid state could produce the same thing.

Dr. Kelley: What important structures do you think were impinged upon?

Student Wallace: The optic chiasma and the olfactory nerves were certainly involved. I would have expected a bitemporal hemianopsia if it had been possible to test his vision in the other eye. The anosmia indicates pressure on olfactory nerves.

Dr. Kelley: Mr. Thames, do you have any other structures in mind?

Student Thames: There is evidence of interference with the function of the 6th nerve.

Dr. Kelley: Any others, Mr. Steinberg?

Student Steinberg: Pressure on the hypothalamus often causes sudden fluctuating temperature changes and also a low temperature such as this man had. A record of night and day variation would have been interesting.

I think the low spinal fluid pressure and the normal Queckenstedt make the likelihood of a tumor in the hypothalamic region proper rather remote however.

Dr. Kelley: Do any members of the faculty have any comment?

Dr. Kredel: It is very important in a case of this kind to know if the patient had polyuria or polydipsia. Intake and output should be carefully checked. My clinical impression was a suprasella meningioma.

Dr. Prioleau: The diagnosis of thyroid deficiency is made too freely. B. M. R. readings such as we have here do not necessarily indicate a profound thyroid deficiency. I think the blood cholesterol reading of only 173 is of more importance than

low B. M. R. Puffiness of the eyes and stiffness of the joints were apparently absent in this case. Do we not have some X-ray reports?

Student Barber: (Reading X ray report of Dr. Kalayjian). "Third examination March 6, 1940. A comparison of these radiographs with those made five years ago on this patient's skull reveal the following: There is now a definite calcification in the region of the third ventricle above and slightly behind the sella. There is also apparently an excessive amount of calcium deposit about the pineal which was not previously present. There is some evidence of the posterior clinoids to a slight degree. We can demonstrate no evidence of supposed previous injury to this man's skull five years ago but there are now these definite changes in the region of the third ventricle with calcification which may represent simple calcification in the choroid plexus at this point but could represent calcification within a brain tumor."

Dr. Cox (presenting brain specimen): This patient had a suprasellar cyst or craniopharyngioma, a tumor of the hypophyseal stalk. As you see there is a thin walled cyst above and partially attached to the pituitary gland which measures about 4 x 5 cm. in diameter. It was filled with clear watery material and had irregular deposits of yellow chalky material attached to its inner surface. The cyst pushes the optic chiasma forward and greatly compresses the hypothalamus and third ventricle. There was erosion and flattening of the anterior and posterior clinoid processes and the pituitary gland was compressed and atrophic.

The anterior cerebral arteries were so stretched over the cyst that some impairment of frontal lobe function might be postulated.

Microscopic study revealed that the cyst was lined by stratified squamous epithelium with deposits of calcium and atheromatous material in portions of its wall. There was also atrophy of the fibers of the optic nerve.

Hypophyseal duct tumors occur at all ages, but most common in early adult life, from about fifteen to twenty years of age.

The X-ray is very valuable in the diagnosis and differentiation of this type of tumors. Nearly half of hypophyseal duct tumors show a calcified shadow in the suprasellar region, such as was present in this case.

SOUTH CAROLINIANA

J. I. WARING, M.D., CHARLESTON, S. C.

TYPE V PNEUMOCOCCIC MENINGITIS COMPLICATED BY LEFT CAVERNOUS SINUS THROMBOSIS, BY I. H. GRIMBALL AND JOHN F. ROBINSON. GREENVILLE. AM. J. DIS. CHILD. 61:535-538, MARCH, 1941.

Sulfapyridine has saved many patients with pneumococcus meningitis. In this case, even the complication was overcome.

FRACTURES OF THE SPINE, BY E. T. KELLEY. KINSTREE. SOUTH. MED. & SURG. 102:705, DEC., 1940.

Dr. Kelley sounds a hopeful note in the treatment of such cases by hyperextension in plaster or on a frame. His technique and special frame are described.

POSTOPERATIVE DISTENTION, BY I. G. LINTON. CHARLESTON. SOUTH. MED. & SURG. 103:194, APRIL, 1941.

Prophylactic use of prostigmin is praised for avoiding postoperative intestinal and vesical distention. Therapy is equally effective.

COMMON NUTRITIONAL FALLACIES, BY W. WESTON. COLUMBIA. SOUTH. MED. J. 34:397, APRIL, 1941.

Dr. Weston exposes the foolishness of food fads and the common fear of poisoning.

THE PYRAMIDAL TRACT OF THE MONKEY. A BETZ CELL AND PYRAMIDAL TRACT ENUMERATION, BY A. M. LASSEK. CHARLESTON. J. COMP. NEURO. 74:193, APRIL, 1941.

An anatomical study.

VARIATIONS IN THE FREE HCL CONTENT OF GASTRIC JUICE IN 61 NORMAL SUBJECTS, BY E. W. TOWNSEND. CHARLESTON. AM. J. CLIN. PATH. 11:108, SEPTEMBER, 1940.

Observations of variations in medical students.

EPITHELIAL PLAQUES OF THE CONJUNCTIVA, BY J. W. JERVEY, JR. GREENVILLE. SOUTH. MED. J. 34:255, MARCH, 1941.

Description of remotely potentially malignant tumors which should be removed.

PHYSIOLOGY OF THE FIRST PORTION OF THE DIGESTIVE TRACT, BY J. VAN DE ERVE. CHARLESTON. SOUTH. MED. & SURG. 103:63, FEBRUARY, 1941.

A review of present-day knowledge.

PAROXYSMAL TACHYCARDIA IN CHILDREN: REPORT OF AN ADDITIONAL CASE, BY G. D. JOHNSON. CHARLESTON. AM. J. DIS. CHILD. 60:1137, NOV., 1940.

A negro boy 11 years old had periodic attacks which could be stopped by lying down or by breathholding.

Any Physician May Exhibit "When Bobby Goes to School" to the Public

Under the rules laid down by the American Academy of Pediatrics, their new educational-to-the-public film, "When Bobby Goes to School," may be exhibited to the public by any licensed physician in the United States.

All that is required is that he obtain the endorsement by any officer of his county medical society. Endorsement blanks for this purpose may be obtained on application to the distributor, Mead Johnson & Company, Evansville, Indiana.

Such endorsement, however, is not required for showings by licensed physicians to medical groups for the purpose of familiarizing them with the message of the film.

"When Bobby Goes to School" is a 16 mm. sound film, free from advertising, dealing with the health appraisal of the school child, and may be borrowed without charge or obligation on application to the distributor, Mead Johnson & Company, Evansville, Indiana.

HISTORICAL SIDELIGHTS

THE BIRTH OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

On Monday, February 14, 1848 a large number of physicians from all parts of the state convened in the Hall of the Apprentices' Library Society in Charleston. These physicians had gathered upon a call made by the Medical Society of South Carolina for the purpose of organizing a State Association.

Upon organizing the Convention elected the following officers:

Dr. James Moultrie of Charleston, President.

Dr. J. C. Ready of Edgefield, Vice President.

Dr. Isaac Branch of Abbeville, Vice President.

Dr. D. J. C. Cain of Charleston, Secretary.

Dr. R. B. Johnson of Camden, Secretary.

Following an appropriate resolution a committee of five was appointed to prepare a Constitution and By-Laws for the State Association composed of the following:

Dr. E. Horlbeck of Charleston, Dr. R. B. Johnson of Kershaw, Dr. R. E. Wylie of Lancaster, Dr. J. A. Mayes of Sumter, and Dr. H. W. Ford of Colleton.

While waiting for the Constitutional Committee to report the Convention took up other matters which afford an interesting side-light on some of the problems of that day. One subject which appeared to be of prime importance was that of a method of registering births, marriages and deaths. It appears that a bill had been introduced into the State Legislature which provided for such registration and which required that the Clerk of Court of Common Pleas should keep the records. The bill provided that information relative to births and deaths should be secured as follows:

"That notice of births and deaths shall be given as hereinafter provided to the magistrate of the beat or of the city, town or village in which said births or deaths respectively occur, or, in the case of incorporated cities, towns and villages, to such magistrate as the corpo-

rate authorities of such cities, towns and villages shall designate for the ward, quarter or division thereof, in which such births or deaths shall occur. And such notice shall be given by the persons following, that is to say: parents shall give notice of the births and deaths of their children; every householder shall give notice of every birth or death happening in his or her house; every owner, proprietor or manager of a plantation, shall give notice of every birth or death happening on his or her plantation; the eldest person next of kin shall give notice of the death of his kindred; and the keeper of any poor house, work house, house of correction, prison or hospital, and the master or other commanding officer of any ship or vessel, shall respectively give notice of every birth and death happening among the persons under his charge, and every of the persons aforesaid, neglecting to give such notice as aforesaid, for the space of thirty days next, after any such birth or death shall have happened, shall forfeit and pay, for the use of the State, a sum not exceeding two dollars, to be levied by warrant of the magistrate, to whom such notice ought to have been given."

This bill had not been passed by the Legislature and it did not satisfy the members of the Convention who thought that such a plan would be highly inefficient and of no scientific statistical value. The Convention, therefore, adopted a resolution recommending to the State Legislature that all physicians be required to report all birth and deaths and that a physician in each district be designated as registrar and be required to keep the records.

Another matter which concerned the Convention was that of premedical education and a resolution was finally adopted that "all young men . . . shall be of good moral character and shall have acquired a good English education, a knowledge of natural philosophy and the elementary mathematical sciences, and such an acquaintance at least with the Latin and Greek languages as will enable them to appreciate the technical language of medicine and read

and write prescriptions." During the discussion of this report an amendment was offered to change the requirements for knowledge of Latin and Greek to read "to read with facility the Commentaries of Caesar and the Greek Testament." After animated discussion the amendment was voted down.

Evidently the members of the profession were having difficulty dealing with unethical druggists for after careful consideration four resolutions were adopted pertaining to this matter, the first of which was as follows: "Resolved that in our transactions with Apothecaries we will deal with those who abstain from recommending and vending quack or patented medicines whenever we have the option."

Some of the members of the profession were political minded and presented the following resolution.

"Resolved, That a Committee of three from each District represented in this Convention be appointed by the President, whose duty it shall be to nominate at least one respectable physician from their respective Districts as a candidate for the Legislature at the approaching election." After considerable argument the resolution was withdrawn.

Medical Botany was of far greater concern to the physicians of 1848 than it is today as evidenced by the following resolution which was unanimously adopted: "Resolved, That a Committee of one from each District represented in this Convention, be appointed by the President, whose duty it shall be to investigate the Indigenous Medical Botany of this State paying particular attention to such plants as are now, or may be hereafter during the term of their service, found to possess valuable medicinal properties, giving not only the Botanical or Medical description of those not accurately described in the standard works of our country, but also the localities where they may be found, and report the same in writing to the next annual meeting of the South Carolina Medical Association."

Physicians throughout the state as well as those in Charleston were keenly interested in the Medical College and adopted the following resolution: "Resolved, That this Convention

does earnestly recommend that the Medical College of the State of South Carolina lengthen her term of lecturing from four to six months; that she may better guard the door of entrance and secure the attendance of first course students by examinations; also that she should conduct her examinations for the degree of M. D. more rigidly.

Resolved, That should she adopt the above recommendations, we will use our influence in her support."

The final action of the Convention was that of considering and adopting the report of the Committee on Constitution and By-Laws. This was done on February 16, 1848 and this date became the official birthday of the South Carolina Medical Association.

Since the Constitution and By-Laws of this organization have been changed considerably since they were first adopted, it is interesting to note some of the provisions of the original document.

Title: "The South Carolina Medical Association."

Members: "Open to every gentleman of the medical profession residing in the State."

Officers: "A Board of Counsellors, a President, two Vice Presidents, Corresponding Secretary, Recording Secretary, Treasurer, and Librarian."

Meetings: "Annually on the third Wednesday of February at ten o'clock a. m., in the City of Charleston, if possible."

Counsellors: "Shall be chosen from among the Fellows residing in the several districts, in the proportion as nearly as can be, of one Counsellor to every five Fellows; providing that at least one Counsellor shall be chosen from each district."

Membership: "Graduate of the Medical College of this State or one who can satisfy the Counsellors that his education, professional or otherwise, has been such as to entitle him to that honor. All irregular practitioners are absolutely prohibited."

Diploma: "Every person elected a member of this Association shall be entitled to a diploma."

The Counsellors (corresponding to the House of Delegates today) were required to

have three meetings a year. No person could be a Counsellor until he had been in practice five years except under extraordinary circumstances.

The annual dues were fixed at \$5.00 per year.

Provision was made for the selection of an Annual Orator by the Counsellors whose duty it was to deliver an oration at the annual meeting of the Association.

Each district or association was required to establish a Fee Bill to govern its own members.

The Code of Medical Ethics adopted by the American Medical Association was adopted.

Following the adoption of the Constitution and By-Laws the following officers were elected and became the first official officers of the South Carolina Medical Association:

Dr. James Moultrie, President.

Dr. Isaac Branch, and Dr. J. C. Ready, Vice Presidents.

Dr. D. J. C. Cain, Recording Secretary.

Dr. R. B. Johnson, Corresponding Secretary.

Dr. F. M. Robertson, Treasurer.

Dr. P. C. Gaillard, Orator for 1849.

The physicians of the state who attended this Constitutional Convention were:

Abbeville District

J. B. Barratt	Thomas B. Dendy
Isaac Branch	J. A. Gilbert
T. J. Mabry	

Barnwell District

Amory Coffin

Charleston District

R. S. Bailey	W. M. Michel
S. W. Barker	J. C. McKewn
J. Bellinger	J. R. Motte
E. S. Bennett	James Moultrie
Henry Boylston	W. L. Moultrie
J. W. Brailsford	T. L. Ogier
D. J. C. Cain	Geo. S. Pelzer
P. M. Cohen	St. J. Philips
Thomas Curtis	F. P. Porcher
J. L. Dawson	F. Y. Porcher
E. H. Deas	J. B. Powell
H. W. DeSaussure	J. F. Prioleau
Edward Elfe	T. G. Prioleau
W. M. Fitch	W. G. Ramsey

C. Fitzsimons
E. B. Flagg
H. R. Frost
A. E. Gasden
P. C. Gaillard
E. Geddings
A. P. Hayne
E. Horlbeck
J. E. Holbrook
Wm. Hume
J. P. Jervy
Jos. Johnson
R. Lebby
Lawrence Lee
A. G. Mackey

Henry Ravenel
F. M. Robertson
B. A. Rodrigues
D. D. Sams
J. W. Schmidt
C. U. Shepard
E. D. Smith
Thos. Y. Simons
E. S. Tennent
B. F. Trapier
A. B. Williman
Henry Winthrop
Sam'l Wilson
W. T. Wragg
Joseph Yates

Chesterfield District

Alexander Williams

Colleton District

H. W. Ford	Edward Mitchell
John May	W. M. Shuler

Edgefield District

J. C. Ready	A. W. Youngblood
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Fairfield District

Thos. T. Robertson

Georgetown District

J. E. Easterling

Kershaw District

W. J. McKain	R. B. Johnson
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Lancaster District

W. C. Cauthen	R. E. Wylie
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Lexington District

Gerhard Muller

Newberry District

J. W. McCants

Orangeburg District

J. W. Keitt	A. Salley
J. Quattlebum	A. Vogt

Richland District

Samuel Fair

Sumter District

J. A. Mayes

Union District

W. K. Sims

York District

J. R. Bratton	W. E. Adams
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(If any members of the Association can furnish the Editor with information concerning any of the men listed above it will be greatly appreciated and such information will be printed in coming issues of the Journal.)

HOUSE OF DELEGATES

HOUSE OF DELEGATES

(April 15, 1941, Greenville, S. C.)

(Continued from June issue)

The President appointed the following as a Reference Committee: Dr. R. C. Bruce, Greenville, Chairman; Dr. Robert Wilson, Jr., Charleston, and Dr. W. R. Wallace, Chester.

The President then spoke as follows: "I should like to take this occasion to thank Dr. Price and Dr. Waring for their valuable assistance during the crisis following Dr. Hines' death. At the meeting of the Council in Columbia we asked Dr. Waring and Dr. Price to undertake the duties of editor and secretary-treasurer for the remainder of the year. These boys have served without salary and have put a great deal of effort into the affairs of the Association. I should like to entertain at this time a rising vote of thanks to Dr. J. I. Waring and Dr. Julian P. Price for their fine service to the South Carolina Medical Association."

A motion to this effect was offered and seconded. Without waiting for the question to be put, the members rose and applauded.

The report of the Board of Councilors was read by its Chairman, Dr. T. A. Pitts, of Columbia.

Report of Board of Councilors

To the Members of the House of Delegates of the South Carolina Medical Association.

Gentlemen:

Since our last meeting, as you know, we have suffered the loss of Dr. E. A. Hines. After his death, the Council met in called session to consider ways and means of carrying on his work. It was deemed advisable to make no permanent appointments but rather to ask certain individuals to help with the work until this annual meeting of the House of Delegates.

Dr. W. L. Pressly was asked to take the State Chairmanship for the National Defense Program, Dr. Joe Waring was asked to take over the Editorship of the Journal, Dr. Julian Price to assume the position of Secretary and Treasurer of the Association, and I to serve as delegate to the House of Delegates of the American Medical Association, should a special meeting of that body be called. These men were asked to serve without pay, except for actual expenses incurred. As a token of appreciation to Dr. Hines, his salary was continued for his elected term of office, and has been paid to Mrs. Hines up through today.

In addition, Council directed that an audit of the

Association's finances be carried out by a public accountant. A condensed copy of the report has been printed in the Journal, and a detail copy mailed to each member of Council. This report shows that all bills have been paid to date and the financial condition of the Association is sound.

The expenses of the Association have been considerably increased since January 1st, due to the work of the Committee on National Defense. This, coupled with the loss of certain members going into the military services makes it necessary to live well within our income and not deplete our small reserve. Council today considered these matters and feels that it may be possible.

Council also passed a resolution to ultimately establish a reserve of \$6000.00, which is approximately one year's budget. According to the Constitution, authority is vested in Council to appoint an Editor of the Association Journal. This action was not taken this morning, since it was deemed wise to defer this matter until this House has elected officers for the coming year.

It has been found that the Constitution and By-laws need revising and reprinting with all authorized changes. The Council recommends that this be done and that a committee composed of the officers, with the Secretary as Chairman thereof, be authorized by the House of Delegates to attend to this matter.

Respectfully submitted,

(Signed) T. A. PITTS, Chairman.

Dr. Kenneth M. Lynch moved that the report be adopted and the recommendations be carried out, which motion was seconded and carried.

President Pressly recognized Dr. Grady N. Coker, fraternal delegate from the Medical Association of Georgia, and extended to him the privileges of the floor. Dr. Coker expressed his pleasure in being present and conveyed the good wishes of the Georgia Association for a most successful meeting.

Dr. Pressly announced the receipt of a telegram telling of the death of Dr. Stewart R. Roberts, of Atlanta, Ga., who, the President said, had often visited the South Carolina Medical Association and had addressed it several times. On motion, duly seconded and carried, the Secretary was directed to send to Mrs. Roberts a telegram conveying the sympathy of the members of the Association.

The report of the Executive Committee of the State Board of Health being called for, this was read by Dr. Kenneth M. Lynch, the Chairman of the Committee.

*Report of the Executive Committee State Board
of Health 1941*

Mr. President and Members of the House of Delegates:

I am privileged to render account of the condition and activities of the South Carolina Health Department of which this Association is the Managerial Board, acting through seven of the eleven members of the Executive Committee elected by this body.

Since the last meeting of the Association, Doctor F. M. Routh, of Columbia, resigned the Chairmanship of the Board, because of ill health, and Doctor Kenneth M. Lynch, of Charleston, was elected Chairman. Doctor Routh retains his position in the Committee, however.

Also since the last meeting, the Committee lost through death one of its most faithful and valuable members and its Vice-Chairman, Dr. Edgar A. Hines, of Seneca. Doctor W. L. Pressly, of Due West, was elected to fill the unexpired term, and Doctor W. R. Wallace, of Chester, was elected Vice-Chairman.

The Department is now entirely housed in the new State Office Building, thus bringing all divisions into immediate contact and relationship. The new quarters, although a great improvement upon the previous status, and while offering better opportunity for effective work in all of the activities, are already proving inadequate for the greatly expanded department and some divisions are handicapped by crowded conditions.

The Executive Committee is satisfied that, although conditions have been trying in many respects and many new and expanded activities have been necessary to undertake, the Health Department during the past year has operated with a maximum of efficiency and a minimum of criticism and interference, this due principally to the outstanding qualities and experience in public health administration of its long serving and long suffering (and underpaid) Secretary and State Health Officer, Doctor James Adams Hayne, and to the various division heads.

The Committee feels that the organization and personnel of the Department is a conspicuous credit to the State and to this Association, which is the State Board of Health, and that in this Department we need bow to no "first" in the Nation. To anyone not familiar with the details of organization and operation within the Department it would be impossible to have a conception of the scope of its field, the problems which it has to meet and the efficiency with which they are regularly solved.

It is worthy of note that the several officers and division heads are generally underpaid, in consideration of their abilities and service and by comparison to analogous positions elsewhere.

In general, perhaps an idea of the magnitude of the services dispensed to the people of the State may be had when it is realized that the cost of operation of the Department amounts now to \$1,178,275.00 annually, of which the State and counties provide \$577,586.00, the Federal Government \$600,589.00. Of the latter it is important to realize that the services provided and the funds expended are under strict provisions and supervision from Washington, and that at times the Department is not primarily responsible for the nature of the activities concerned.

The total amount of Federal funds spent in South Carolina for public health activities during the last seven years is approximately \$9,940,000, making possible the expansion of already organized services and the institution of others, and from which has resulted material calculable reduction of sickness and death in the population, to say nothing of the great benefits which cannot be exactly calculated.

To recite here even in important part the nature of the services rendered by the eleven Divisions of the Department would be impractical. It would be less than even courteous, however, to not name to you the people who are responsible for successful operation of these functions or to note certain highlights of their services.

Of these the Division of Rural Sanitation, under Doctor Ben F. Wyman, Director, and Doctor G. S. T. Peoples, Assistant Director, is of the widest spread, in supervision of the work of all of the County Health Units. In the present defense emergency the functions of this Division are increasingly pressing and important, while difficulties in maintaining competent personnel in the face of military withdrawals is and will be more and more acute.

The Division of Preventable Diseases, under the direction of Doctor G. E. McDaniel, has been particularly active in malarial control work, made pressing by the construction of large water reservoirs within the State and in relation to military cantonment areas.

The Hygienic Laboratory, Doctor H. M. Smith, Director, is one of those services often forgotten because seldom conspicuous. To say that during last year nearly 300,000 examinations were done here, and that the serological tests connected with the syphilis control program pressed its facilities to the extreme, conveys but small idea of the great importance of this work to the physicians and the people of the State.

Another such fundamental function is supplied in the Bureau of Vital Statistics, under Doctor Martin B. Woodward. Even this division is seriously pressed by National Emergency matters, in supplying essential records and statistical information, and its work increased by some 30 per cent.

(To be continued)

WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

LETTER FROM THE PRESIDENT

To the Members of the Woman's Auxiliary to the South Carolina Medical Association:

We are entering upon our seventeenth year's work with very bright prospects for service. Our Advisory Council has been appointed, chairmen of standing committees have been named, and the elected officers are planning interesting programs.

We are particularly fortunate in securing for our Advisory Councillors Dr. Robert Wilson, Dr. C. C. Ariail, Dr. William Weston, Jr., Dr. Frank Strait, and Dr. Julian Price. Dr. George Truluck, President of the South Carolina Medical Association, says of these men: "They are all good doctors and all good citizens." And may we add that they are all charming gentlemen.

May I suggest that we lay emphasis this year upon health education. Among the most important objectives of our Auxiliary are to direct public thinking and actions in channels the medical profession desires, and to extend authentic information on health. As a group of 257 intelligent, well-informed club women we ought to be able to render much assistance by planning club programs, providing authoritative health speakers, distributing literature provided by the American Medical Association, and arranging radio broadcasts, newspaper publicity, et cetera.

Our draft boards have discovered a deplorable nutritional deficiency among our people, probably due to ignorance more than any thing else. This is a condition which could be remedied by disseminating knowledge about vitamin content, the proper food to plant, as well as to buy and to eat. Our State Health Department will no doubt welcome our assistance in this work. Another campaign which should interest us is mental hygiene. Then there is cancer control. And do not forget tuberculosis. There are still people in South

Carolina who do not know that these diseases require early treatment. Please arrange for health talks in every section of your county, and report the number of such talks at our annual meeting next spring.

Let me remind you to consult your Advisory Councillors upon everything that you undertake. We must see to it that health leadership is kept where it belongs—in the hands of the medical profession.

Cora Sprott Pollitzer, President
(Mrs. R. M. Pollitzer)

Woman's Auxiliary to the South
Carolina Medical Association.

Medical Auxiliary Entertains State Officers at Tea

The Laurens County Medical Auxiliary, the youngest in the state, Monday afternoon inaugurated a new feature in the social life of the organization by entertaining the executive board of the state auxiliary at a seated tea at the lovely home of Mrs. John Garrett Hart on West Main street. The honor guests also included last year's executive board. The delightful informality of the affair contributed to the pleasure of the guests who called and leisurely visited from four until five-thirty o'clock.

Mrs. Hart, Mrs. P. E. Cannon, Mrs. J. H. Teague and Mrs. C. P. Vincent greeted the guests at the door, while Mrs. Martin Teague, Mrs. D. O. Rhame, Jr., and Mrs. George Blacklock received in the living rooms.

Mrs. R. P. McGowan, Mrs. W. H. Dial and Mrs. W. A. Whitlock, Jr., entertained in the dining room and served assorted tea, sandwiches, punch, mints, and pralines. The punch was served from a large bowl and candies passed on crystal trays by local auxiliary members, assisted by Miss Harmolyn Hart and Mrs. James Strother.

THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

August, 1941

NUMBER 8

The Surgical Treatment of Bronchiectasis

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AND

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The prevalence of bronchiectasis in almost every community makes a review of the clinical features of this chronic pulmonary disease hardly worth while. In the adult the disease is usually of many years duration and it develops secondary to the pneumonias associated with the exanthematous diseases, whooping cough, aspirated foreign bodies, and other lesions mechanical or inflammatory which tend to interfere with the normal ingress or egress of air. The most common symptom is a cough which is productive of a foul sputum ranging in volume from a few cubic centimeters to as much as one liter or more per day. Recurrent attacks of an associated pneumonitis characterized by increase in sputum volume, high fever, chills, and sweats are common. Pleuritic pains, secondary anemia, and episodes of hemoptysis are manifestations of the disease. A non-productive cough associated with frequent small or massive pulmonary hemorrhages may be the only suggestion in an otherwise healthy individual of the presence of bronchiectasis. Clubbing of the fingers (pulmonary osteoarthropathy) associated with some clinical evidence of cyanosis is suggestive of a bronchiectasis of long duration.

It is a physician's duty to make a clear cut diagnosis in an individual presenting symptoms of a chronic pulmonary disease. A physical examination though important will not always suffice, and it will be necessary to supplement the examination by an X-ray of the chest. A

record of his physical status and a guide to his progress will have been established. Though the X-ray can be called the most important refinement in the diagnosis of chest disease, it was the introduction of lipiodol by Sicard and Forestier¹ in 1922 which furnished the present day accurate method for determining the extent and location of bronchiectasis. A correct diagnosis based upon a physical examination, a study of the bacterial flora of the sputum, and an X-ray film supplemented by a contrast filling of the bronchial tree wherever necessary with lipiodol is an absolute prerequisite to either the successful medical or surgical management of bronchiectasis.

One of the greatest medical contributions to the successful treatment of bronchiectasis has been the selection of patients suitable for surgical approach. It must be accepted that only surgical removal of the diseased portion of the lung or of the entire lung when involved can be expected to affect a cure of the disease. The medical treatment of bronchiectasis will do much to relieve distressing symptoms, and it is of most importance in the preparation of the patient for successful surgical management. Singer² gives an excellent review of the medical treatment of bronchiectasis, but willingly concludes that only extirpation of the bronchiectatic areas will accomplish a cure.

In 1901 Heidenhain³ performed the first successful lobectomy in man; however, the profession was slow to appreciate the possibi-

tities of the procedure due primarily to a lack of knowledge of the physiology of the chest. During the World War Graham and Bell⁴ clarified many problems in the physiology and established basic principles which were soon recognized and adopted. This marked the beginning of modern thoracic surgery. During the ensuing years many lobectomies were performed for bronchiectasis; however, the high mortality rate and only fair results were discouraging until Brunn⁵ reported six one-stage lobectomies for bronchiectasis with only one death in 1929. Three years later Shenstone and Janes⁶ introduced their hilum tourniquet for temporary control of the hilum of the diseased lobe and the one-stage technique most commonly in use at present for performing lobectomies was established.

In 1932 Nissen⁷ was the first to successfully remove an entire lung. In America Haight⁸ performed the first successful pneumonectomy for bronchiectasis in 1932. Since this report, numerous successes have appeared in the literature.

The technique for removal of a lobe or entire lung in the treatment of bronchiectasis has been essentially mass ligation either in one, two, or multiple stages. Briefly, the Brunn-Shenstone-Janes technique consists of mobilization of the diseased lobe or lung with the development of its pedicle, temporary occlusion of the hilum with the Shenstone tourniquet, amputation of the lobe or lung, and either mattress suture closure of the stump or individual ligation of the structures beyond the tourniquet. Soon after the introduction of this technique generalized empyema, delayed hemorrhage, and the development of broncho-pleural fistulae were frequent, and an attempt to obviate such dangers lead to the introduction of a two-stage lobectomy which was described by Alexander⁹ & ¹⁰ in 1933 and in 1935. The principle underlying this technique was the establishment of firm pleural adhesions over the lobe that was not to be resected at the first-stage thus avoiding a generalized pleuritis during the second stage. Alexander was able at this time (1935) to present more convincing evidence in favor of a two stage than a one stage operation in performing lobectomy for bronchiectasis. In the span of a few years the

Brunn-Shenstone-Janes single-stage technique became more refined, and the disadvantages of performing routinely a two-stage operation were obvious.

The smooth convalescence, infrequent complications of empyema and opening of the bronchus following individual ligation in performing a pneumonectomy, directed our attention two years ago to the possibility of individual ligation in performing a lobectomy. After careful dissection of a group of fresh cadavers we observed that it was not only possible, but would prove most likely a practical solution to some of the problems encountered in the modern usual tourniquet—mass ligation technique. We were impressed by the fact that resection of a lobe was possible within the pleural cavity thus avoiding in suppurative disease the danger of contaminating the mediastinum. At best, the performance of lobectomy by tourniquet control of the hilum followed by mass ligation is crude and unsurgical. A high incidence of bronchopleural fistulae develop, residual empyema pockets though small occasionally account for death, the postoperative course is at times stormy even with recovery, and long periods of hospitalization are necessary. In small cities where access to large municipal free clinics cannot be obtained the economic aspect in the treatment of any elective surgical disease becomes of paramount importance.

INDICATIONS

The indications for lobectomy depend upon the extent of the disease, the clinical course of the patient, age of the patient, ability of the patient to withstand a major surgical operation, and the expected result following lung resections.

Patients with minimal bronchiectasis presenting few symptoms should be treated medically and expectantly. On the other extreme patients presenting total involvement of both lungs or of a sufficient area which is incompatible with life after extirpation must be considered hopeless. Surgery in these advanced cases has nothing to offer, and the medical management is difficult and disappointing to both patient and physician. Bilateral bronchiectasis is not a contra-indication to lobec-

tomy and many successful cases of bilateral lobectomy are on record. In two cases of bilateral basal disease we have resected the lobe showing the most extensive disease and had anticipated a lobectomy on the contralateral side; however, the improvement in these two patients was so striking that we have hesitated to proceed with our original plan. The extent of bilateral pulmonary resection must always be considered in relation to the patient's vital capacity.

The relationship of the clinical course and the operative risk will be considered under the preoperative care of the patient. If bronchiectasis is complicated by an acute infection and pneumonitis, it is not a favorable time for lobectomy.

The age of the patient is not in itself a contraindication to lobectomy. In the aged pulmonary emphysema of the uninvolved lobes in bronchiectatic patients often is present. The myocardium will have been damaged from a long period of toxicity, and decreased kidney function may be an added factor. After the age of 50, it is wise to proceed with caution in performing lobectomies; however, certain cases above this age will be suitable and deserve the chance for restoration of health. Children do well as a rule and once a diagnosis has been established the resection should be carried out.

Factors which would contraindicate any other elective major surgical procedure also have a direct bearing upon the consideration of a pulmonary resection. Cardiovascular disease and other serious conditions will not warrant subjecting certain patients to an operation.

If a lobectomy or pneumonectomy is indicated in any pulmonary disease, the medical profession as well as the patient is entitled to the information of his chance of cure and survival. In table I will be found some of the recent published mortality statistics. It will be observed from these figures that with proper management of bronchiectasis by competent surgeons an operative mortality of less than 10 per cent can be expected in cases undergoing a lobectomy. It is also safe to conclude that a majority of the cases subjected to operation will be cured.

PREOPERATIVE CARE

General Consideration: Most pulmonary resections are elective operations and preoperative observation will do much to safeguard the welfare of a patient. Transfusions are indicated where secondary anemia is prominent. Postural drainage in patients with copious amounts of sputum usually brings about a decrease in the sputum volume, a lessened toxicity, and an improvement in the patient's general condition. Bronchoscopic drainage over a period at weekly intervals proves beneficial in hastening a sufficient recovery for an operation. Lobectomy and pneumonectomy should be deferred in suppurative disease of the lung until an adequate trial with conservative treatment permits the lesion to become stable. Chemotherapy has proven to be of definite value in reducing toxicity, and the type of drug used is based upon the bacterial flora of the sputum. Routinely, 60 grains of sulfathiazole are given daily to all patients for 3 days preoperatively anticipating a pulmonary resection.

The extent of bronchiectasis is determined before a lobectomy is decided upon. The bronchial pattern is determined by filling the bronchial tree with lipiodol first under fluoroscopic control on one side with a catheter introduced and at a later date (5 days to a week) the other side is filled. X-ray films are taken after each filling in three planes and the extent of the disease is obvious. Occasionally, it will become necessary to do a segmental filling of some portion of the lung and the Thompson catheter is used here. It has been our practice to proceed with pulmonary resection 2 to 3 weeks after the last bronchogram has been performed. No ill effects have resulted; however, Dolley and Jones¹¹ & ¹² attributed the development of pneumonia in one of their cases to the retained lipiodol in a good lobe.

Pneumothorax: This is a valuable preliminary procedure in pneumonectomy for cancer of the lung or other pulmonary neoplastic lesions; however, suppurative disease does not warrant its use as a preparatory measure in lobe or lung resections.

Pleural Poudrage: In 1935 Bethune¹³ de-

scribed a method for establishing symphysis between the visceral and parietal pleurae of the uninvolved lobe by first establishing a partial pneumothorax and then blowing a sterile talc over the surfaces of the lungs, not to be resected, through a thoracoscope. We have not used this method, and since we have been employing individual ligation in performing lobectomies we are now beginning to believe that a free pleural space is desirable. This point remains to be settled by further experience.

CARE OF THE PATIENT DURING OPERATION

General Consideration: In performing lobectomies other than the middle lobe the ordinary thoracoplasty position on the table is used in that a posterior incision is made. The same position is used for total removal of the lung through the posterior approach. If an anterior approach is contemplated in the total removal of a lung, the patient lies on his back. Irrespective of the position, the operation is always performed with the head lower than the body which permits gravity bronchial drainage by mouth.

An intravenous cannula is placed in the saphenous vein just above the ankle for continuous infusion of physiological saline solution and citrated blood. Blood is obtained from suitable donors a day before the operation. The best treatment of shock is to prevent it, and in this series no operative shock was encountered.

A bronchoscopy is not performed preliminary to the introduction of anesthesia in all instances of pulmonary resection, and we do not believe it to be necessary. If the patient has a large volume of sputum, it becomes imperative to empty the tracheobronchial tree as thoroughly as possible through the bronchoscope preceding the operation. If the chest is "dry" and the airway clear, the added procedure may defeat the purpose for which it was intended. A bronchoscopy is not performed routinely at the close of the operation for the same reasons; however, the bronchoscope is always ready should an occasion demand its use preoperatively, during the operation, or postoperatively.

Anesthesia: This is not as an acute problem to the general surgeon doing thoracic surgery in small cities as the literature in some instances would lead us to believe. Beecher¹⁴ rightfully states that, "With the standardization of thoracic surgical procedures, it may be expected that more thoracic operations will be carried out by a greater number of surgeons. In some cases this may be desirable, yet as long as the anesthesia technique is pictured as possible only for an expert with wide experience and much equipment, it is not likely than even 'standardized' thoracic operations will be attempted in any except the large clinics." He presented a plea for simplicity in anesthesia as applied to thoracic surgery, and his results are far superior to those obtained with more complicated techniques and apparatus.

In performing operations upon the open pleural cavity it is necessary to have at one's disposal a technique suitable for building up a positive pressure in the airway. This can be accomplished by the usual gas machine in the average hospital with a tight fitting face mask either with or without an intratracheal tube. The positive pressure stabilizes the mediastinum, prevents collapse of the contra-lateral lung, brings about re-expansion of the lung at frequent intervals during the operation and of the remaining lobe or lobes at the close of the operation. Positive pressure is not without danger, for we have experienced a rupture of the remaining lobe in a patient upon whom a left lower lobe lobectomy was performed for multiple lung abscesses at the close of a well executed operation when an attempt was made to re-expand the upper lobe. The patient died 24 hours postoperatively and air was present along the fascial planes of the pulmonary vascular bed which extended into the mediastinum and up into the neck. A pressure exceeding 15 cm. of water approaches the danger level. We prefer after this accident to use very little if any positive pressure for reinflation at the close of operation, but depend upon a negative suction apparatus to bring about re-expansion which will be discussed later.

The airway must be kept clear during anesthesia, and in those cases where bronchial secretions and blood are likely to be encountered repeated aspiration through an intratracheal

tube is indispensable in avoiding anoxia and its ill effects. If the sputum volume is large, it is best to introduce the intratracheal tube under local anesthesia preceding the inhalation anesthesia.

The two most common anesthetic agents used in thoracic surgery are cyclopropane and ether vapor-oxygen mixture. We have used both of these agents having abandoned the former over a year ago. High concentrations of oxygen are possible in both cases; however, our anesthetics have been smoother, aspiration through the intratracheal tube more satisfactory, and the welfare of the patient impressed us as being more secure in using the ether vapor-oxygen mixture.

POST OPERATIVE CARE

On return from the operating room the patient is placed in the Trendelenburg position for 24 hours. Intranasal oxygen is administered for one to three days depending upon the patient's condition. The patient's position is changed frequently from the back to the operative side. Morphine is given in sufficient dosage to permit cough without pain. Water balance is maintained by the intravenous route with 5 per cent glucose in distilled water replacing only the chloride loss with equal quantities of physiological saline solution. As soon as the patient reacts well from the anesthesia, the air-tight under water drainage tube system is placed on 16 cm. of negative suction. This brings about re-expansion of the remaining lobe and early obliteration of the pleural space resulting from resection of the diseased lobe. It has not been necessary to do a temporary phrenic nerve interruption in order to hasten obliteration of the space. We depend solely upon the negative suction, but the drainage tube is watched carefully to prevent it from plugging up with clotted blood. In 48 hours the remaining lobe will be found to have re-expanded as evidenced by physical signs, and inability to promote fluctuation in the drainage tube. We have never drained longer than 48 hours, and so far we have no cause to regret this practice. The patient is changed from the Trendelenburg position to a semi-Fowler's position 24 hours postoperatively.

RESULTS

The postoperative course of these patients upon whom lobectomy has been performed by the individual ligation technique is remarkably smooth. The temperature seldom rises above 101° (F). In 10 days they are, as a rule, out of bed and discharge is permitted anywhere from 13 to 27 days postoperatively.

It will require detailed reports of cases to evaluate the immediate results of individual ligation technique in performing lobectomy. Blades and Kent¹⁵, and Churchill¹⁶ have also recently recommended the application of this technique wherever feasible.

In table II the results obtained in cases subjected to lobectomy for bronchiectasis by the tourniquet technique (2 cases) and individual ligation technique (10 cases) are given in more or less detail. In the 2 cases where the tourniquet was applied bronchopleural fistulae with an associated empyema developed, and post-operative hospitalization days extended over



Figure 1.—Appearance of chest two years after left lower lobe lobectomy. There is no deformity of the chest.

TABLE I
LOBECTOMY FOR BRONCHIECTASIS (RECENT PUBLISHED MORTALITY)

Author	Date	No. Cases	Entire Series	Mortality
Churchill ¹⁶	1940	133	No 10 yr. period	3%
Edwards ¹⁷	1938	199	Yes	12%
Blades & Kent ¹⁵	1940	15	No Last 15 cases	7%
Holst ¹⁸	1938	12	Yes	8%
Dolley & Jones ^{11 & 12}	1939	17	No Last 17 cases	11%
Graham ¹⁹	1938	15	No Last 15 cases	None
O'Brien ²⁰	1937	17	No 15 consecutive cases	6%
Coleman & Seastrunk	1941	12	Yes	None

TABLE II
LOBECTOMY FOR BRONCHIECTASIS
(Results in 12 cases)

Case	Sex & Age	Operative Technique		Postoperative Complications		Post-operative Days in Hospital	Results Postoperative Period
		Mass Ligation	Individual Ligation	Broncho Pleural Fistula	Empyema		
1	F 25	Yes—Right Lower		Yes	Yes	76	Cured—29 months
2	M 37	Yes—Left Lower		Yes	Yes	42	Cured—27 months
3	M 22		Yes—Right Upper	No	No	15	Cured—14 months
4	F 22		Yes—Left Lower	No	No	19	Cured—14 months
5	F 32		Yes—Left Lower	No	No	13	Marked improvement—9 months. Bilateral Lower lobe disease preoperative
6	F 40		Yes—Left Lower	No	No	17	Cured—5 months
7	F 37		Yes—Left Lower	No	No	25	Cured—12 months
8	F 28		Yes—Left Lower	No	No	16	Cured—6 months
9	F 32		Yes—Right Upper	No	No	14	Apparently cured, 6 months. Tuberculosis (mistaken diagnosis)
10	F 13		Yes—Left Lower	No	No	18	Cured—25 months. Bronchiectasis and lung abscess secondary to foreign body
11	F 52		Yes—Left Lower	No	No	27	Marked improvement—3 months
12	F 24		Yes—Left Lower	No	No	13	16 days postoperative

TABLE III
TOTAL PNEUMONECTOMY FOR BRONCHIECTASIS
(Results in 2 cases)

Case	Sex & Age	Operative Technique		Postoperative Complications		Post-operative Days in Hospital	Results Postoperative Period
		Mass Ligation	Individual Ligation	Broncho Pleural Fistula	Empyema		
1	M 18		Yes—Left Lung	No	Yes—Minimal	21	Cured — 9 months. Empyema healed without interference
2	F 21		Yes—Right Lung	Yes	Yes	31	Died one month after discharge. Influenza complicated by pneumonia, left lung

a long period in each instance. In 10 patients upon whom a lobectomy was performed by the extramediastinal individual ligation technique the average postoperative hospitalization days was 17. There were no incidences of temporary bronchial fistulae or empyema in these cases. There were no incidences of hemorrhage during the operation and no latent hemorrhage in any of the cases. All the patients subjected to operation are still living. Clinical cures resulted except where bilateral lower lobe disease was present prior to removal of the most seriously involved lobe on one side. These two cases show such striking improvement that removal of the lower lobe on the opposite side is being deferred.

In addition to the above series of lobectomies, two cases have been subjected to pneumonectomies for total bronchiectasis. (Table III). These patients survived the operation and one is well 10 months postoperatively. The other patient died one month after discharge from the hospital from an influenzal pneumonia of the remaining left lung.

SUMMARY

Bronchiectasis is a curable disease when that portion of the lung involved can be extirpated without encroaching too much on the cardio-respiratory reserve of the patient. Careful attention to preoperative care, care of the patient during the operation, and postoperative care are of great importance. The technique of the operation has been refined offering great promise to a decrease in postoperative complications thus making for much shorter periods of hospitalization. The recent published mortality rates of lobectomy are in keeping

with other major operative mortality statistics. In this series of 12 consecutive lobectomies and 2 pneumonectomies for bronchiectasis, no deaths resulted.

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DISCUSSION

DR. RUDOLPH FARMER, STATE PARK:

Dr. Coleman has very ably discussed this subject and has demonstrated in a most interesting manner the surgical treatment. Because a great many patients with bronchiectasis, however, are not suitable for surgery, I think it might be well to consider for a few minutes some of the medical manifestations and treatment.

I recall the case of a patient who was admitted to the South Carolina Sanatorium several years ago with a diagnosis of pulmonary tuberculosis. He had a rather classical picture, with symptoms of fever, cough and expectoration, emaciation, and frequent hemoptysis. In our study of the case we showed the existence of a bilateral basal disease. We were then struck by the fact that his sputum was negative for tubercle bacilli. We tested him with strong dilutions of old tuberculin intradermally, and he was negative to all. Iodized oil was then introduced, and definite sacculations were demonstrated. We returned this patient to his home and wrote the doctor who had referred him that he had bronchiectatic disease and was not tuberculous. Some time later the doctor was heard to say: "Bronchiectasis—humph, just another form of tuberculosis." I do not relate this just to be critical but to emphasize that for many years bronchiectasis fell into the category of pulmonary disease, pulmonary abscess, pulmonary tuberculosis, and even malignancy. But for many years now bronchiectasis has been recognized as a definite entity.

Bronchiectasis is a bronchial dilatation, the exact etiology of which is controversial. It seems that infection of the bronchial wall, with subsequent fibrosis and distortion, is the main cause. The diagnosis of bronchiectasis is not difficult now, since the direct intratracheal administration of iodized oil has been used. It is fairly easy to pick up the sacculations, and even the cylindrical types of bronchiectasis. It is generally of two kinds, dry and wet.

The dry type usually does not find its way to the physician's care unless hemorrhage occurs. Oftentimes, however, secondary infection does result and produces cough and the expectoration of sputum, often foul.

One thing that should be borne in mind is the frequency with which upper respiratory infections are encountered in those who have bronchiectasis. It is certainly important, in the consideration of the treatment of bronchiectasis, to cooperate with the otolaryngologist who will adequately treat the sinusitis, that is often present in bronchiectatic individuals.

So far as the medical treatment is concerned, I think everything that has been used in the treatment of any pulmonary disease has been suggested or tried in the treatment of bronchiectasis—rest, diet, climate, direct intratracheal administration of drugs, inhalation of vapors, and even phrenic nerve operations and oleothorax and pneumothorax. Of all of these, I suppose the postural drainage, or putting the patient in position so he gets gravity drainage, has proven the most helpful. Some cases have reported that they made so much progress on limited rest and postural drainage that the symptoms improved markedly and deceived the patient and physician. But when it comes to complete cure of bronchiectasis, I think in the light of present knowledge there is only one, and that is surgical removal of the lobe or lobes, which Dr. Coleman has so interestingly described.

DR. W. ATMAR SMITH, CHARLESTON:

Mr. President, there is very little that I can add to the very effective method of treatment of bronchiectasis as outlined by the authors in their very well prepared paper. I just mentioned to Dr. Farmer a few minutes ago that when I first began the practice of medicine no one dreamed it would ever be possible to open the thorax and remove a portion of the lung.

It is interesting to speculate for a moment on what factors were concerned in bringing about the extensive pathological changes which necessitate operations of the character outlined. We might wonder as to whether or not these individuals had some predisposition to this disease due to changes brought about by the failure of the lung to develop properly. In other words, was it a failure of the embryonal bronchial buds, which eventually form the bronchi and bronchioles, to develop normally and thus afford a nidus for the incurrence of infection and starting a series of phenomena which has eventuated, over the years, into a full-blown bronchiectasis.

Or did these cases result from an unexplained infection—an undiagnosed pneumonia? It is very probable that many cases of broncho pneumonia go undiagnosed; that they are called acute bronchitis, influenza, etc., and they are often more severe than the clinical picture would indicate. Resultant damage to the bronchial wall interferes with many of its

functions; probably, most notably, that of cleansing the lung, thus predisposing to stagnation and spread of the infection. Repeated insults of this character undoubtedly lead to the development of bronchiectasis, or again might it be the residuum of a suppurative pneumonitis or abscess. The initiating factors having cleared up but leaving damaged bronchial walls which remain and develop into very characteristic bronchiectasis. It is, therefore, very hard in the individual case to determine what the basic factor was in originating the process. It is in fact a pathological state resulting from unknown factors, the chief one undoubtedly is infection with damage to the bronchial wall.

I believe we have at hand at the present time some measures that might prevent the development of this serious disease. As I said before, many so-called cases of bronchitis and upper respiratory infections

are complicated but unrecognized pneumonia. If we would study these cases more often with the X-ray, this fact would be revealed. The organisms most often found in these cases belong to the coccic group, and most often the streptococcus. Having now available the sulfonamide group of drugs, I believe that with their judicious use; with rest and careful supervision, much can be done in the way of prevention. I agree with Dr. Farmer that after the condition has developed the only hope of cure is the surgical removal of the affected lobe. I believe, however, that the cases should be selected carefully, for there are many associated pathological changes, fibrosis, emphysema, and extensive infection that preclude surgical therapy, and indiscriminate operations will seriously impair the mortality record of this procedure.

Sulfathiazole in the Treatment of Childhood Pneumonia

R. M. POLLITZER, M. D., F. A. A. P.

J. F. SIMMONS, M. D.

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GREENVILLE, S. C.

During the months of March and April, 1941 an unusually large number of children were admitted to the Greenville General Hospital with the diagnosis of pneumonia. This period was also noteworthy for the epidemic of measles and whooping cough in the community and many of the cases seen at the hospital were complications of measles and whooping cough.

There is nothing new any longer about the use of sulfathiazole in pneumonia. Neither is pneumonia a rare disease in childhood and infancy. Furthermore, it is a well known fact that pneumonia is extremely common as a sequel or complication of whooping cough and of measles.

The following report should be of interest, however, because of the results obtained. The number of recoveries, is far greater than was anticipated. For it will be noticed that of these patients 8 were under one year of age, the youngest being only four months. Further, 15 of the 23 were 2 years or less.

It has been our experience, as well as that of many others, that pneumonia, especially bronchopneumonia secondary to measles or

whooping cough, has an extremely high mortality. Since more than half the fatal cases in pertussis are due to bronchopneumonia, our mortality should have been higher. In this series, eight pneumonias were secondary to pertussis.

Many of the cases were far advanced and some, at first examination, appeared hopelessly ill. Seven children, who are not included in this series, died in less than 24 hours. Several of these expired in less than 8 hours after admission to the hospital wards. Case No. 23 (B. C.) died 27 hours after admission.

It was our intention at the beginning to alternate sulfapyridine and sulfathiazole but we soon limited ourselves to sulfathiazole exclusively since it was our finding that sulfathiazole was the better-tolerated drug of the two. Using the oral route our patients received 1 grain per pound per 24 hours, as follows:—the first dose (as soon as the diagnosis was made) was 1/3 to 1/2 of the planned daily dose. Thereafter the total dose was given in 6 equally divided amounts at four-hour intervals. In addition, parenteral fluids, stimu-

SULFATHIAZOLE IN PNEUMONIA

	Name	Sex	Race	Age	Diagnosis	Admitting Date	Admitting Temp.	1st Day of Normal Temp.	Assoc. Cond.	Discharge Date	End Result
1.	R. S.	Male	Colored	7 months	Bronchopneumonia	3/13/41	101	3/14/41		3/18/41	Cured
2.	M. P.	Female	Colored	11 months	Bronchopneumonia	3/4/41	103.2	3/5/41	Pertussis	3/12/41	Cured
3.	D. C.	Female	White	9 months	Bronchopneumonia	3/15/41	105	3/19/41	Pertussis	3/22/41	Cured
4.	R. W.	Female	White	7 years	Bronchopneumonia	3/17/41	100.4	3/19/41	Measles	3/21/41	Cured
5.	M. L.	Female	White	1 1/2 years	Bronchopneumonia	3/14/41	100.0	3/17/41	Pertussis	3/20/41	Cured
6.	W. R.	Male	White	4 months	Bronchopneumonia	3/12/41	103.8		Otitis Media	3/22/41	Died
7.	E. F.	Male	White	9 months	Bronchopneumonia	3/27/41	104.2	4/2/41	Myringitis	4/3/41	Cured
8.	J. W.	Male	White	11 months	Bronchopneumonia	4/4/41	103.6	4/10/41	Pertussis	4/18/41	Cured
9.	J. L.	Male	Colored	2 years	Bronchopneumonia	4/4/41	104.6	4/6/41	Malnutrition	4/12/41	Cured
10.	L. C.	Male	White	9 years	Bronchopneumonia	4/4/41	103	4/8/41	Measles	4/11/41	Cured
11.	N. W.	Female	Colored	2 years	Bronchopneumonia	4/5/41	104.8	4/6/41	Pertussis	4/9/41	Cured
12.	W. B.	Male	Colored	6 years	Bronchopneumonia	4/6/41	105	4/8/41		4/12/41	Cured
13.	C. R.	Male	White	7 years	Lobar pneumonia	4/8/41	103	4/9/41		4/16/41	Cured
14.	A. K.	Male	Colored	22 months	Bronchopneumonia	4/11/41	103	4/15/41		4/18/41	Cured
15.	N. M.	Male	Colored	10 years	Lobar pneumonia	4/7/41	101.2	4/8/41		4/12/41	Cured
16.	S. K.	Male	Colored	1 year	Bronchopneumonia	4/8/41	103.8	4/10/41		4/12/41	Cured
17.	P. B.	Female	White	6 months	Bronchopneumonia	4/10/41	103.5	4/12/41	Measles	4/16/41	Cured
18.	J. B.	Female	Colored	10 months	Bronchopneumonia	4/10/41	102.8	4/12/41		4/14/41	Cured
19.	J. P.	Male	White	5 years	Bronchopneumonia	4/10/41	103.6	4/12/41	Measles	4/16/41	Cured
20.	N. T.	Female	White	1 1/2 years	Bronchopneumonia	4/19/41	102	4/22/41	Measles	4/27/41	Cured
21.	L. E.	Female	White	7 years	Bronchopneumonia	4/20/41	100	4/22/41	Pertussis	4/27/41	Cured
22.	E. W.	Female	White	4 years	Bronchopneumonia	4/18/41	99.2	4/20/41		4/24/41	Cured
23.	B. C.	Male	White	2 years	Bronchopneumonia	4/25/41	100.6		Pertussis Malnutrition Dehydration	4/26/41	Died

BLOOD COUNTS ON ENTRANCE

No.	Initials	Age	Leucocytes	Neutrophiles	Transitionals	Lymphocytes	Eosinophiles
1.	R. S.	7 mos.	8,250	43	4	53	
2.	M. P.	10 mos.	19,000	74	6	20	
3.	D. C.	9 mos.	12,950	59	13	28	
4.	R. W.	7 yrs.	5,000	62	19	16	3
5.	M. L.	1 1/2 yrs.	29,000	32	6	62	
6.	W. R.	4 mos.	5,900	29	8	63	
7.	E. F.	9 mos.	5,700	54	14	30	2
8.	J. W.	11 mos.	9,200	40	2	56	2
9.	J. I.	2 yrs.	24,450	90	4	6	
10.	L. C.	9 yrs.	18,900	56	2	40	2
11.	N. W.	2 yrs.	12,750	82	4	14	
12.	W. B.	6 yrs.	9,200	72	5	23	
13.	C. R.	7 yrs.	12,500	89	1	10	
14.	A. K.	22 mos.	8,500	72	1	28	
15.	M. N.	10 yrs.	15,100	65	6	24	5
16.	S. K.	1 yr.	16,050	68	3	29	
17.	P. B.	6 mos.	10,400	61	8	31	
18.	J. B.	10 mos.	8,600	60	1	39	
19.	J. P.	5 yrs.	7,200	74	5	20	1
20.	N. T.	1 1/2 yrs.	18,500	64	10	26	
21.	L. B.	7 yrs.	18,600	73	5	22	
22.	E. W.	4 yrs.	12,200	79	3	18	
23.	B. C.	2 yrs.	126,000	48	8	44	

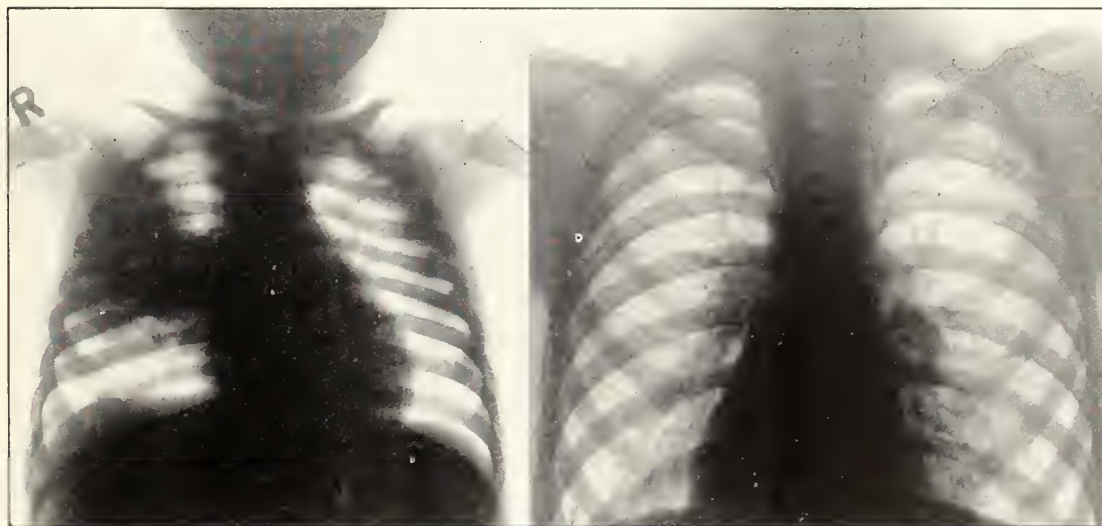


Figure 1.—Case 9.—J. I. col. male, age 2 yrs. Developed pneumonia during attack of pertussis. Cured.

Figure 2.—Case 10.—L. C. white male, aged 9 yrs. Developed pneumonia associated with pertussis and measles. Recovered.

lants, steam inhalations, and oxygen per nasal catheter, were administered where they were indicated.

In our group of 23 consecutive cases the clinical diagnosis was confirmed by X-ray. (It is impossible to reproduce photographs of all these plates, but two are presented to show the type of pneumonia encountered.) There were 13 males and 10 females; 9 colored and 14 white. The age ranged from 4 months to 10 years. The admitting temperatures ranged from 99.2 to 105 degrees Fahrenheit. The average length of time before temperature reached normal was 2.7 days. The average stay in the hospital was less than 6.5 days.

It was our experience that on admission the total leucocyte count was often much lower

than the seriousness of the illness would have led us to expect. This was probably due to measles. In a large percentage of the cases the subsequent white counts were higher than on admission. This was associated with clinical improvement.

There were no toxic symptoms whatsoever from the administration of sulfathiazole. In view of the age range of our cases and the seriousness of bronchopneumonia and lobar pneumonia in this group we were gratified at our results, since of the total of twenty-three cases there were only 2 deaths. The average hospital stay was markedly decreased.

Since this was written there have been 30 more cases in the hospital ward treated with sulfathiazole with excellent results.

Complications Connected With the Treatment of Varicose Veins in the Leg

WM. H. PRIOLEAU, M. D.

CHARLESTON, S. C.

In varicose veins the circulation is sluggish or retrograde, and there is passage of blood into them from the deep veins. This is due to their dilated and tortuous nature and the incompetency of their valves. The systems generally affected are the internal saphenous, the external saphenous, and the communicating veins which connect the peripheral and the deep systems. As a result of the disturbed circulation the extremity from below upwards becomes edematous and prone to infection and ulceration. There is an added load upon the deep venous system, in that some of its blood escapes into the peripheral system to pass down the leg. In advanced cases there is also some interference with the arterial supply as a result of the edema and infection¹.

Some complications connected with the treatment of varicose veins can be attributed directly to the treatment while others are of the same nature as those which occur spontaneously in the course of the disease, being precipitated or exaggerated by the treatment. The purpose of

the treatment is to effect an orderly and a permanent obliteration of the varicose veins and to forestall the development of further varicosities by preventing abnormal back pressure upon susceptible veins as yet uninvolved. This is accomplished by a combination of ligation of the diseased veins and injection into them of a thrombosing solution;² the injections being made at the time of ligation and also subsequently if necessary. Complications may result from the technic of ligation and injection as well as from reactions to them. Thus to some extent they can be controlled.

To a great extent complications can be avoided by adhering to certain general principles of treatment. It is advisable that the patient be ambulatory as this tends to limit thrombosis in the superficial veins and to prevent it in the deep veins. Accordingly injection and ligation should not be performed³ in the presence of an acute illness, or at the time of another operation. Nor should they be performed in the presence of uncontrolled infection and ex-

tensive edema of the involved extremity due to the danger of causing unduly extensive thrombo-phlebitis with lymphangitis and cellulitis. In case of ulceration it is well to attempt a healing of the ulcer, failing this the infection should be under control before attempting the obliteration of the veins. Preliminary treatment by pressure bandages or by bed rest with moist compresses, should be instituted. Pregnancy has a particularly adverse affect upon varicose veins. In these cases, if relief is not obtained with pressure bandages it is probably better to ligate alone, saving the injections until after delivery. It is generally advisable to operate upon only one leg at a time, the same applies to a less extent to subsequent injections.

Pressure bandages are important in the preparation for oblitative treatment, also during the course of treatment and at times even after the completion of the injections. Unless properly applied they prove ineffective and may lead to complications. The most effective ones are the elastic adhesive, the multiple rubber sponge dressing, and the gelatin boot. In principle they act the same by compressing the peripheral venous circulation, but their suitability varies with different conditions. They should be applied evenly and firmly, otherwise ridging and cutting of the skin results. They should always begin in the metacarpal region, include the malleoli, and extend upwards generally to the knee, and at times loosely above it. Any other method of application will result in a tourniquet action with congestion below. The elastic weave bandage is of limited value as it does not remain in place, likewise the elastic stocking as it causes but little pressure and that not evenly distributed. It should be borne in mind and duly impressed upon the patient that a satisfactorily applied pressure bandage is most effective with the patient ambulatory.

Injection outside the vein results in induration with likely subsequent ulceration. The thigh wound for the high ligation of the saphenous is particularly susceptible to complications of infection and hematoma formation due to its location, the excessive amount of fat, and bleeding from divided veins overlooked or insecurely ligated.

Injection of the thrombosing solution into the vein may be followed by a systemic reaction, especially if it contains a protein radical naturally or as an impurity. Such reaction is of an allergic nature. It has most often occurred with sodium morrhuate² when there has elapsed a period of time since the last injection. On the other hand it has occurred in the course of injections given at short intervals. It has followed the injection of Monolate³, a synthetic product supposedly free of protein. A minor reaction may serve as a warning to discontinue the present solution. Precautions such as preliminary testing, small injections, and changing solutions are advocated, but are not an absolute safeguard. Serious reactions and even deaths have been reported, however, the author has had no such unfortunate experiences. Adrenalin proves most effective in such reactions, and thus should always be at hand³.

Embolism is the most dreaded complication, but fortunately it rarely occurs. It may occur in thrombosis of the large saphenous trunk with extension of the thrombus through the saphena-femoral junction. This complication seems to be effectively prevented by a high ligation of the saphenous vein preliminary to injection⁴. Apparently embolism does not occur by way of the communicating and external saphenous vein, due to their much smaller size⁶ and likely other anatomical factors. Having the patient ambulatory³ is something of a safeguard by keeping the deep venous circulation active.

A most troublesome and somewhat disabling complication occurring during treatment is an extensive thrombo-phlebitis of the varicose veins. It is particularly apt to occur in the presence of large and tortuous varicosities. With it there is a systemic reaction accompanied by fever. Locally there is an acute chemical or infectious inflammatory process extending well beyond the veins. There is a resultant lymph blockage with considerable edema. Ulcers may extend or recur. The pain and stiffness are too great to permit of much activity. Subsidence is likely to be slow. Bed rest is generally necessary for a few days. Blood clots may require drainage by incision, but suppuration seldom takes place.

Such extensive thrombo-phlebitis may be

prevented by limiting the amount and the number of injections whether at the time of ligation or subsequently. Also by avoiding obliterative treatment in the presence of acute infection and extensive edema. The application of a pressure bandage from toes to knee and at times above immediately following injection serves to reduce the amount of blood in the varicose veins resulting in thrombosis with less reaction. The patient's being ambulatory also tends to limit the extent of the thrombosis.

The generally practiced procedure of injection at the time of ligation is commonly followed by an extensive chemical thrombophlebitis, sometimes disabling the patient for a few days to a week. It is justified in that especially in the thigh it results in a more complete thrombosis of the saphenous trunk with obliteration of the communicating veins between the superficial and deep systems. It definitely shortens the course of treatment by reducing the number of subsequent injections necessary for the obliteration of the remaining varicosities. This reaction may be limited by ligation of the saphenous vein at the knee level⁵ before retrograde injection at the femoral junction, thus preventing thrombosis below the knee; this being accomplished later by injections.

In case of extensive varicosities edema may be present throughout treatment, and persist even after the obliteration of the varicosities. The lower half of the leg is generally involved. Skin affections and ulceration are prone to occur. While there is no way of preventing it, it may be lessened by a gradual obliteration of the veins. It can generally be controlled by the continuous use of a pressure bandage, so that the patient remains ambulatory.

Among the late complications recurrences are outstanding. In general they are due to persistent back pressure⁷⁻⁹ causing recanalization of previously thrombosed veins, or a varicose development in veins theretofore uninvolved. The usual sites of such back pressure are branches of the saphenous below the point of ligation, the communicating veins in the thigh and the leg, and the external saphenous at the popliteal space. Accordingly care should be taken to ligate the saphenous vein at its femoral junction and to ligate separately its

three main tributaries at this level. This procedure may be technically difficult; failure to accomplish it is the most common cause of recurrence. Communicating branches between the deep and the peripheral systems lower in the thigh and in the leg are relatively small and are identified and ligated only by an operative procedure⁸ too extensive to warrant general use. It appears that they are satisfactorily cared for by ligation of the saphenous vein at various levels with thrombosis of the intervening segments. The external saphenous vein when involved should be ligated and injected distally at its junction with the popliteal vein. It hardly need be pointed out that injection without ligation is almost certain to be followed by recurrences⁶, particularly in those cases in which there is involvement of the main saphenous trunk.

The subject of ulceration is too broad to be considered in detail. Reference has already been made to the presence of ulcers in connection with obliterative treatment. In general, ulcers heal, not to recur, following satisfactory obliteration of the varicose veins¹. In some cases, chronic ulcers with a thick fibrous base are best excised and the site skin grafted¹. They may be so extensive and with such secondary changes that healing by any method seems out of the question. The term constrictive is sometimes applied to such ulcers.

Eczema¹ is prone to occur where the varicosities are extensive or of long standing. It is most troublesome in that it may persist after the obliteration of the varicosities. Skin over other parts of the body may be affected. In some instances skin affections may be caused by the solutions injected.

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DISCUSSION

DR. W. C. HUNSUCKER, BENNETTSVILLE:

There is very little that I can add to Dr. Prioleau's discussion of the complications connected with the treatment of varicose veins. There are, however, several points that I think we had best keep in mind. The first is that in outlining a schedule of treatment for a patient with marked varicose veins we should try to instruct the patient and warn him of certain complications, because in my experience an uncooperative patient with varicose veins is just about the worst thing you can find. So I think the first thing is to be assured of securing the cooperation of the patient himself.

Dr. Prioleau's method of keeping the patient ambulatory is productive of the greatest part of his good results. I think our bad results come from the patient's not being ambulatory, thus resulting in poor circulation, even though we have pressure bandages and other types of support.

Dr. Prioleau did not say much about technique in ligation. Of course, it is recognized that regardless of the type of surgical procedure you are doing the technique has to be faultless. That is particularly true of ligation above the knee. If you get hemorrhage or infection you will get into trouble.

Little can be added to Dr. Prioleau's discussion as to pressure bandages. The only other thing I can add is that we have used some of the sulfonamids beneath our pressure bandages in healing ulcers that have been very stubborn, particularly the ulcers that are gray and never become healthy regardless of what has been done. Pressure bandages will give you a certain amount of healthy granulation, but it is not absolutely normal. We have been using sulfanilamide as powder under the pressure bandage, and I am sure we have healed some ulcers more rapidly than we would have otherwise, even though the patients were ligated and injected. I have used other preparations, but I am sure that in a stubborn case, where the bacterial count is high and the infection is deep, sulfanilamide powder beneath the pressure bandage will certainly cut down the bacterial count. Over in our section most of our vari-

cose veins are in the poorer white people; we do not see so many in the Negro race. For various reasons we have tried the common ointment base—codliver-oil mixture about which Dr. Hardin, of Monroe, North Carolina, has had quite a little bit in the literature. As time goes on I think we are going to find that codliver oil has a definite bacteriostatic effect and has healing qualities, just what I do not know, but it is worth trying in stubborn ulcers and various other types of infection that you run into in the treatment of varicose veins.

DR. GEORGE T. TYLER, JR., GREENVILLE:

My discussion is really in the form of a question. In the treatment of varicose veins, I have ligated and divided the great saphenous at the femoral ring, at the same time ligating and dividing all its branches in this field. Then, instead of injecting the distal part, I have ligated and divided it just above the knee, and in several places in the leg. I wonder whether this is better than injection of the sclerosing solution to obliterate these veins, which have a tendency to recanalization. Maybe Dr. Prioleau can tell us.

Unless I am very particular to instruct them not to do so, patients injected below the knee, will often wear garters. When they return in a month or so, the veins will have recanalized. Of course they should not wear garters after treatment.

DR. PRIOLEAU, Closing the Discussion:

I wish to thank Dr. Hunsucker for his discussion. In regard to Dr. Tyler's question, no doubt his procedure is satisfactory in many cases, as in some cases the thrombosing of the saphenous trunk in the thigh is not necessary. However, failure to thrombose the saphenous trunk is one of the chief causes of recurrence inasmuch as there are communicating veins between the peripheral and deep systems which cannot be readily ligated and their presence leaves a head of pressure which tends to cause a recanalization of previously thrombosed veins and the development of a varicose condition in predisposed veins.

QUESTION: What solution do you use?

I have been using sodium morrhuate at the time of operation and shortly thereafter. When an interval exists between injections, I use Monolate as it is supposedly free of protein and thus less likely to provoke an allergic reaction.

QUESTION: What is the maximum dose?

I usually inject five cc. into the distal end of the saphenous vein at the femoral junction, and at the same time five cc. into the distal end of the saphenous vein just above the knee. Subsequently I inject one vein at a time, using 2 to 5 cc. in the vein.

QUESTION: At what intervals?

At intervals of one to several weeks depending upon the amount of reaction as indicated by the extent of the thrombophlebitis, and the amount of edema—also the convenience of the patient.

THE JOURNAL

OF THE

South Carolina Medical Association

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Original manuscripts, subject to approval by the Editor and the Editorial Board, are desired for publication in the Journal. They should be typewritten, double spaced, on 8½ x 11 paper. References should be complete, and only such as relate directly to statements quoted in the paper. Illustrations will be used as funds permit, or as authors are willing to bear the necessary increase in cost. Short original articles are preferred to long reviews.

Office of Publication: (In care of the Editor)	Florence, S. C.
Subscription Price	\$3.00 per Year

AUGUST, 1941

IS IT WORTH THE TROUBLE

Is a State Medical Journal an asset or merely a habit? Is it a publication which is worth the energy and time and money involved in its production or is it merely a tradition to be maintained? To be more specific, is the Journal of the South Carolina Medical Association worthy of its continuation as the official publication of the State Medical Association?

These are questions which have been asked, and rightly so, by many members of the State Association. And these are the questions the Editor and the Editorial Board, which took office four months ago, discussed.

This Journal can only be justified as it presents scientific and general information which is of value to those who read it.

How well this Journal is fulfilling its function can only be stated by those who as members of the Association read it. And to them this editorial is addressed.

Do you who read this Journal find it valuable? Do you find the original articles interesting and informative? Does the Practitioner's Page furnish you with information and suggestions which are of value in your every day practice? Do the Medical Summaries present material which added to your general fund of medical knowledge, make you a better physician? Do the news items, society reports, and general information prove interesting and keep you informed as to what is going on

throughout the state? Do you read the editorials and find them provocative or do you pass them over with a glance? Do you like the report of the Pathological Conference? Are the book reviews an aid to you in appraising new books which have appeared or do you look upon them as mere fillers used to round out the required number of pages in the Journal?

These are the questions which we are asking the members of the Medical Association and we suggest that you consider each one in turn and that you write to the Editor or to some member of the Editorial Board and give your honest and candid answers.

The Editor and Editorial Board are attempting to continue in the Journal all that has been of value in the past, but are anxious at the same time to branch out into new fields should they give promise of increasing the readability and value of the Journal. It is impossible to satisfy everyone but it is our sincere hope that we can make of this Journal a publication which will be one that is not only read when it arrives but that is kept by the physicians for future reference. Such cannot be accomplished, however, by the Editorial Board alone, but must come from the cooperation and helpful criticisms of the members of the Association.

Again let us urge that you, the readers and owners of this Journal, let us know what you think of this and the past few copies and what suggestions you have for its improvement.

LOOK AT THE ADS

In this issue of the Journal several new advertisements are to be noted and it is to be hoped that within the next few months more and more advertisements will appear in this publication.

The firms which advertise with us are those who believe in us and those who feel that this Journal is an excellent medium through which to carry announcements concerning their products. It is only right that they should expect

the owners of the Journal (i. e. the members of the S. C. Medical Association) to cooperate with them and to give their products first consideration.

Might we suggest to the readers of the Journal that they read the advertisements, that they bear in mind the firms which pay for these advertisements. This will not only prove a courtesy to our advertisers but will at the same time stimulate the interest of others to advertise with us and in this way give us more funds with which to improve the Journal.

Dr. Dillon R. McClary, who has been practicing in Virginia, has moved his office to Lynchburg, S. C. Dr. McClary is a graduate of the University of Louisville School of Medicine.

The Roper hospital (Charleston, S. C.) board of commissioners was authorized by the Medical Society of South Carolina to attempt to obtain federal aid for the construction of a new hospital plant here large enough to meet the needs of an expanding population.

Previous plans for a 250-bed hospital were termed inadequate, and the federal government will be formally asked in the near future to provide the community with a hospital commensurate with the size of the community.

The money will be sought to build an entirely new plant, probably combined with Roper, it was brought out at the special meeting of the society, held at Roper last night.

The Medical society is working with the board of welfare in the matter.

For the local Treatment of Acute Anterior Urethritis

(DUE TO NEISSERIA GONORRHEAE)

SILVER PICRATE*

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Silver Picrate, Wyeth, has a convincing record of effectiveness as a local treatment for acute anterior urethritis caused by *Neisseria gonorrhoeae*.¹ An aqueous solution (0.5 percent) of silver picrate or water-soluble jelly (0.5 percent) are employed in the treatment.

A complete technique of treatment and literature will be sent upon request

*Silver Picrate is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

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PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

"HE THAT HATH EARS TO HEAR LET HIM HEAR"

By J. W. Jervey, Jr., M. D.
Greenville, S. C.

"Listen my friends, and you shall hear" provided always you want to hear, and provided you haven't some kind of deterioration between the ears which is beyond human and perhaps also divine help.

No matter what branch of medicine a physician is engaged in, he not infrequently runs across a person who is hard of hearing and who is quite likely to ask his advice about the matter. Often he has already seen some doctor who has said there was nothing to be done for him. As a consequence this group of individuals is daily being exploited by salemen of various hearing aid devices and often sold instruments of little or no value, or if not that, instruments which do not serve as well as the proper ones would do.

Although an otologist, I believe I am unbiased in stating that an ear man who is informed on the subject should examine all deafened persons and should be the one to advise whether or not a hearing aid is desirable. Too much advice is being given by unqualified persons both within our midst and by the laity, particularly by traveling salesmen who already have placed hearing aids on the "racket" list.

The American Medical Association has recommended a number of hearing aids, any one of which may suit an individual case, but each patient should be given the opportunity to try our several different devices to see which he prefers. There is no such thing as fitting a hearing aid in a manner comparable to fitting a pair of glasses. The much vaunted "individual fittings" are largely the bunk. No hearing aid can be "set" so as to flatten out the irregularities in the audiometric curve. The most that can be done is to damp or step up the intensity of the frequencies at one end of the scale or the other. Also the bone conduction aid which has been so extensively advised by at least one

organization is rather infrequently preferable to the air conduction aid.

Furthermore the best results are not secured from any hearing aid without the help of an ear mold made for the individual patient. Hearing through an aid is 40% better with the individual ear mold than with the standard pieces so often used. This fact is well recognized and now many salesmen are pouring their own plaster molds without ever having had the patient see an otologist! One man I know has a dentist pour his molds for him! Serious accidents have already occurred and will occur again in numerous instances if patients are not first referred for competent examination and advice. Laymen have before now poured plaster molds through perforated ear drums, have broken off the molds in the ear canal, or have failed to get a mold with a sufficiently long canal piece for best results. Many times it is not even known to the person pouring the mold whether such a simple condition as impacted cerumen is present. As a matter of fact the otologist himself should also make the mold as he alone is capable of avoiding dangerous errors and at the same time assuring the patient of the best possible device.

There is no reason why a person who is handicapped by his hearing should be denied the help of a hearing aid provided he wishes it. The use of an aid, far from making his natural hearing worse, at times seems to improve it. There can be no more objection to wearing such an aid than to wearing a pair of glasses, and the hard of hearing person who can use an aid and refuses to do so is making not only his own existence more difficult, but that of his friends as well.

IMMUNIZATIONS

Pertussis (Cont'd)

Certain agents used in the production of active immunity have been used in treatment, but it has not been proven that they enhance natural immunity. The little value obtained

is utterly disproportionate to the long series of injections recommended.

"The bronchopneumonia which occurs with this disease often responds to sulfanilamide."

Pneumonia

"Treatment: The specific antiserum, 100,000 to 200,000 units as a passive immune principle has definite value in treating pneumonia, the number of units injected depending upon the severity of the disease. Many feel that sulfapyridine should be used in combination with specific antisera. One member of the Committee feels that sulfapyridine should be tried first, and serum used only if this procedure fails. Other members of the Committee feel that serum has a definite value in refractory and toxic cases. Chemotherapy is valueless in leukopenic pneumonias."

Polio-myelitis

Diagnostic Test: None.

Active Immunity: None recommended.

Passive Immunity:

1. Exposures: No vaccine therapy is advised. Convalescent serum (10 to 20 cc.) injected intramuscularly has been used in epidemics, but the available evidence does not support its use. Nasal sprays (zinc chloride, tannic acid solution, etc.) have not proved efficient. Their use should be discouraged until their value and harmlessness are better substantiated.

2. Treatment: From 25 to 100 cc. of convalescent serum injected intramuscularly or intravenously have been used for active and passive immunity. Its value has not been demonstrated in controlled experiments. It should never be used intrathecally.

Measles

Active Immunity: None. Recent work on vaccination is still in the experimental stage.

Passive Immunity:

1. Exposures: To prevent measles, 10 cc. of convalescent serum or 4 cc. of placental globulin extracts should be injected intramuscularly within the first few days after exposure. Since exposure occurs about 3 to 4 days before the rash appears, the serum is rarely given in time for complete protection.

The objective should be to modify and not to prevent the disease. Hence, the materials should be given on the sixth day after exposure, i. e., about the second day after the rash has appeared in the original case contacted. Because disease depends on intimacy of exposure, dose of specific agent, size, age, etc., and the efficacy of any serum upon a variable antibody titer, the precise result which may be obtained after the use of convalescent serum is unpredictable. The result may be (a) failure—unmodified measles, (b) failure—measles after prolonged incubation period, (c) a modified attack with persistent immunity and (d) complete protection. It is pertinent to stress the point that permanent immunity does not invariably follow modified measles.

2. Treat: Adult whole blood, human convalescent measles serum and placental globulin extract have been used as passive immune principles. It is the opinion that adult whole blood is only of slight value and variable at best. Convalescent serum in amounts of 50 cc. or more and from 2 to 10 cc. of placental globulin extract have been used in the prodromal stage of this disease and are of value. The bronchopneumonia seen with this disease is usually due to streptococci and responds to sulfanilamide.

Scarlet Fever

Diagnostic Test: The specific test is the Dick test. It is not 100 per cent accurate, although a positive test usually indicates susceptibility. If the physician bears in mind the small percentage of negative reactors that may still be susceptible, the test is invaluable. Inject 0.1 cc. of diluted scarlet fever Dick toxin intradermally and read in 24 hours. If there is an area of redness of 0.5 cm. or larger, the test is positive and denotes susceptibility.

The Schultz-Charlton or blanching test is performed by injecting 0.5 cc. of convalescent scarlet fever serum intradermally into patients with a macular type of rash. There will be blanching of the skin at the site of the injection. It has its limitations. They are: (1) a negative test does not rule out scarlet fever; (2) it is useless to try to blanch a papular rash and (3) it will not appear where the rash

is more than three days old. It is of little practical value and usually will not aid in diagnosing the doubtful case.

Active Immunity: Scarlet fever streptococcus toxin is used to immunize susceptible individuals. A Dick positive reaction may be rendered negative by injecting increasing skin test doses of scarlet fever toxin—650, 2500, 10,000, 30,000 and 100,000 to 120,000 skin test doses at weekly intervals. If immunization is to be carried out it should not be started before 12 and preferably after 18 months of age. Most of the Committee feel that scarlet fever immunization cannot be put in the same class with diphtheria immunization.

One member of the Committee has immunized nurses and doctors on his wards and has practically wiped out scarlet fever in this group. The Committee feels that immunization should be given to nurses, doctors, and to children of orphanages, preventoriums, sanitoriums and nursing homes. They feel that immunization can be used by the private physician if he remembers and acquaints the parents of the reactions. The Committee as a whole as yet does not feel that this procedure should be adopted as a public health measure.

Passive Immunity:

1. Exposures: Exposures should not be given specific drugs. Some members of the Committee feel that sulfanilamide should be used.

2. Treatment: (a) Scarlet fever antitoxin has been used as a passive immune principle. Its use has been associated with severe serum sickness. Recently, two purified scarlet fever antitoxins (Lederle and Parke, Davis) have been described which cause but few reactions and give excellent results. One or two ampoules, from 9,000 to 18,000 U. S. Standardized units (450,000 to 900,000 original neutralizing units) of these types of antitoxins injected intramuscularly may be used as early as possible in the toxic and severely ill case. (b) Convalescent serum may be of value, but it has to be used in large amount, at least from 80 to 100 cc. Late complications can be treated with sulfanilamide. (c) Some members of the Committee believe that sulfanilamide should be used in the early case.

Method of Desensitization

The extent of desensitization depends on the history and the mode of antitoxin administration, and to a lesser extent on the reaction of the skin and eyes to the sensitivity tests. The following is the recommended method of desensitization when serum is to be given either intramuscularly or subcutaneously and the skin or eye test is positive.

1. Inject 1.2 cc. subcutaneously; if no reaction occurs within 15'

2. Inject 0.5 cc. intramuscularly; if no reaction occurs within 30'

3. Inject the therapeutic dose of serum.

When serum is given intravenously and the skin or eye test is positive, the following is the method of desensitization.

1. Inject 0.1 cc. subcutaneously; if no reaction occurs within 15'

2. Inject 0.2 cc. subcutaneously; if no reaction occurs within 15'

3. Inject 0.5 cc. intramuscularly; if no reaction occurs within 15'.

4. Inject 0.1 cc. intravenously; if no reaction occurs within 15'

5. Start to inject the remaining dose slowly.

If reactions occur after any one of these doses, stop, wait a few hours and start again, giving the last dose that did not cause any reaction.

When individuals are horse asthmatics or have had treatment for *any* allergic condition, consult the allergist.

CAUTION: Have atropine sulfate and adrenalin chloride on hand.

NOTE: The recent refined, concentrated, purified, globulin and modified antitoxins have robbed therapeutic serums of most of their dangerous qualities, although specific sensitivity may still remain.

Tetanus

Active Immunity: It has been recommended that tetanus toxoid be injected subcutaneously in doses of 0.5 cc., 1.0 cc., and 1.0 cc. every 2 to 4 weeks. It is of proven value and may be given to children sensitive to horse serums. A combination of tetanus and diphtheria toxoid has been recommended. See previous note under DIPHTHERIA. If exposure subsequently

occurs after immunization, the immunity must be stimulated by further injection of tetanus toxoid instead of injecting tetanus antitoxin. The duration of such immunity is not known. It has been stated that this toxoid may sensitize patients.

Passive Immunity:

1. Exposures: Inject from 1,000 to 2,000 units of tetanus antitoxin intramuscularly. This must be repeated in from 7 to 10 days if the wound is deep or on the face, or if it covers a large area and if the exposure has been massive. See also under "Active Immunity." Some inject combinations of tetanus and gas gangrene antitoxins.

2. Treatment: Tetanus antitoxin is used as a passive immune principle. Two members doubt the value of tetanus antitoxin. Others feel the amounts sometimes used, from 100,000 to 800,000 units injected intramuscularly and intravenously, are excessive. It should not be injected intraspinally. Some of the Committee feel that 10,000 to 40,000 units will do as much good as a massive dose.

Typhoid Fever

Active Immunity: Typhoid fever vaccine injected subcutaneously in doses of 0.5 cc., 1.0 cc., and 1.0 cc. every 2 to 4 weeks is used as an active immune principle in those localities where typhoid fever is of common occurrence. The immunity probably does not last longer than 2 years and is never absolute. A common practice is to reinject 1 cc. every year in the Spring. Intradermal immunization of susceptibles by typhoid vaccine has not been evaluated as yet. Oral vaccination is sometimes practiced and is said to be efficient, but agglutinins are not produced in such high titer as after parenteral injections. It should not supersede parenteral injections.

Passive Immunity:

1. Exposures: Inject typhoid fever vaccine—dosages—see under "Active Immunity."

2. Treatment: Antityphoid fever serum may be mentioned; it is only experimental in character.

Active and Passive Immunization Musts

The Committee recommends:

(1) That every child be vaccinated against small pox, immunized against diphtheria, immunized against typhoid fever if necessary and injected with rabies vaccine if the need arises and have a Tuberculin test.

(2) That the following passive immune principles be used in treatment: diphtheria antitoxin, meningitis antitoxin or antiserum, pneumonia serums and tetanus antitoxin.

(3) That diphtheria (under conditions noted in text) and tetanus antitoxins and human convalescent measles serum or placental immune globulin be given to exposures.

Active and Passive Immunization Mays

The Committee believes:

(1) That staphylococcus toxoid, tetanus toxoid, staphylococcus antitoxin, B. tularemia antiserum, anti-anthrax and gas gangrene antisera, Botulinus antitoxin, detoxified pertussis antigen, poison ivy antigen, fungus antigens, lymphogranuloma antigen test, convalescent poliomyelitis human serum, human convalescent measles serum or placental immune globulin may be tried.

(2) That the value of encephalitis, dysentery and mumps serum, Krueger's endo-antigen or Topagen has not been established.

(3) That the Schick test is nearly 100 per cent accurate and that the Dick test is not quite so valuable, but is, from a practical standpoint, a valued test.

The Committee feels that immunization might be carried out as follows:

(1) Vaccinate against smallpox at any age during an epidemic, but routinely any time between 3 to 12 months.

(2) Immunize against diphtheria between 9 and 18 months. Tetanus toxoid may be used in combination with diphtheria toxoid.

(3) Vaccinate against pertussis between 6 and 9 months.

(4) Do a Schick test between 18 and 24 months. Re-immunize against diphtheria if necessary.

(5) Do a Tuberculin test at 3 years of age and possibly every third year thereafter up to the eighteenth year.

(6) Repeat the Schick test and smallpox vaccination at 6 years or during epidemic

periods. Re-immunize against diphtheria and revaccinate if necessary.

(7) If tetanus toxoid is desired, it may be given at any age period, but the reactions are not so severe if given between 2 and 6 years. If combined with diphtheria toxoid, it may be given at the same time. Scarlet fever toxin might be given in epidemics and to groups previously indicated. Typhoid fever vaccine may be given when and where indicated.

TRY PABLUM ON YOUR VACATION

Vacations are too often a vacation from protective foods. For optimum benefits a vacation should furnish optimum nutrition as well as relaxation, yet actually this is the time when many persons go on a spree of refined carbohydrates. Pablum is a food that "goes good" on camping trips and at the same time supplies an abundance of calcium, phosphorus, iron and vitamins B₁ (thiamine) and G (riboflavin). It can be prepared in a minute, without cooking, as a breakfast dish or used as a flour to increase the mineral and vitamin values of staple recipes. Packed

dry, Pablum is light to carry, requires no refrigeration. Here are some delicious, easy-to fix Pablum dishes for vacation meals:

PABLUM BREAKFAST CROQUETTES

Beat three eggs, season with salt, and add all the Pablum the eggs will hold (about 2 cupfuls). Form into flat cakes and fry in bacon fat or other fat until brown. Serve with syrup, honey or jelly.

PABLUM SALMON CROQUETTES

Mix 1 cup salmon with 1 cup Pablum and combine with 3 beaten eggs. Season, shape into cakes, and fry until brown. Serve with ketchup.

PABLUM MEAT PATTIES

Mix 1 cup Pablum and 1 1/2 cups meat (diced or ground ham, cooked beef or chicken), add 1 cup milk or water and a beaten egg. Season, form into patties, and fry in fat.

PABLUM MARMALADE WHIP

2/3 cup Pablum, 1/4 cup marmalade, and 1/4 cup water. Fold in 4 egg whites beaten until stiff and add 3 tablespoons chopped nuts.

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*The 25 patients rooms and the public rooms are beautiful and modern.

Rates are incomparably low considering the professional services, physical therapy and dietetics which they embrace. They start at \$35 per week.

A small department is maintained for the Lambert treatment for alcohol.

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Four blocks from the Capitol

MEDICAL SUMMARIES

Victims of **Black Widow Spider Bite** are frequently seen by physicians in this section of the country and a recent article by Z. B. Noon and W. L. Minear in *Southwestern Medicine* (June, 1941) upon this subject is worthy of careful reading. These authors report that cases of black widow spider bite have been recorded in thirty-two states in this country and that the mortality rate runs around 5%.

Following a general discussion of the symptomatology and diagnosis these writers give a detailed account of results obtained on six of their cases with antivenin.

Summarizing their results they state:

"Our series of cases untreated and treated with antivenin is too small to warrant final conclusions. However, definite points of interest are quite obvious after analyzing the treated and untreated cases.

"Unfortunately some of the cases receiving the antivenin also received other therapy. The general experience with non-specific therapy as reflected in other cases as well as our own is not satisfactory. With non-specific therapy the course of these severe symptoms is but little altered. The marked reduction of morbidity in the cases treated with antivenin is very obvious when compared to those cases not treated with antivenin. In our cases which received both non-specific and specific treatment the tremendous reduction of morbidity we feel certain was due to the antivenin. We feel definitely justified in making such a statement because of the spectacular results which are seldom if ever observed.

"The morbidity in the treated cases is minimal. It has been our experience when the antivenin is given before symptoms are severe and grossly established that morbidity is practically nil. When the symptoms are very severe and several hours have elapsed before treatment with antivenin the final curative effect is delayed in proportion to the time of the bite and the time of treatment and the severity of symptoms. The earlier the antivenin is given the more prompt is the relief. It is possible that

by giving double the usual dose of the antivenin in the severe cases and when time is a factor (a long period having elapsed after the bite) more prompt relief would result.

"Two of our cases treated with antivenin developed a delayed serum reaction in the form of hives which lasted forty-eight hours.

"Our experience makes it possible for us to recommend the value of antivenin (*Latrodictus mactans*) to reduce the morbidity following black widow spider bite. We feel that antivenin should also prove of value in reducing the mortality, especially in the very young and the aged."

For many years the question of **Thymic Death** has been discussed and various conclusions reached. Some schools of thought believe that it is not an unusually rare occurrence while another school doubts the existence of such a condition.

A comprehensive discussion of the subject is presented by C. A. Hellwigg in the *Journal of the Kansas Medical Society* (June, 1941). He concludes that "when complete autopsies including histological, bacteriological and chemical examinations are made, the diagnosis 'Thymic Death' becomes less and less frequent," and he presents the following conclusions.

"Our standards of normal thymus weights have to be corrected. What has been called an enlarged thymus in the past, is in reality the normal thymus of the well nourished individual.

"There is no relation between the size of the thymus gland and sudden death. While it cannot be denied that thymic enlargement may produce symptoms of compression of the trachea, thymic death from mechanical causes, except in malignant thymoma, seems to be extremely rare.

"An internal secretion of the thymus has never been definitely demonstrated. The experimental data concerning the function of the

thymus are not yet applicable to clinical medicine.

"The term status thymico-lymphaticus in the strict sense of Paltauf is not a pathological entity and may just as well be discarded.

"There is no treatment of the thymus by injection of any extract, by radiation or by extirpation of the thymus which would have any effect upon preventing sudden death.

"In most cases of sudden death, a complete autopsy including bacteriological and chemical studies will detect a more rational cause of death than an enlarged thymus."

The problem of the **Treatment of Atrophic Arthritis** is one which confronts every physician who deals with adult patients. That there is no simple cure for this condition is well brought out by J. P. Rowell in an article in the *Journal of The Florida Medical Association* (May, 1941). Following a full and exhaustive study he presents the following conclusions:

"Chronic arthritis is a crippling disease causing enormous suffering, disability and economic loss. The treatment is grouped under seven headings:

1. General Care of the Patient. The health level should be raised to the highest possible point. Attention should be paid to the metabolic rate, correction of anemia and care of the bowels.

2. Diet. The diet should be high in calories, high in vitamins, and adequate in respect to calcium, phosphorus, and iron. The concentrated carbohydrates and highly refined grains should be avoided, and emphasis placed on protective foods.

3. Management of Foci of Infection. Foci should be eradicated early and thoroughly. Conservatism in this field is becoming more popular.

4. Vaccines and Filtrates. Vaccines have a questionable place in treatment and seem to be losing favor. They should certainly not be overstressed.

5. Medication. Other than aspirin for pain, medicaments are of little specific help. Bee venom is of use principally as a method of counterirritation. Sulfur has no place in the

treatment of arthritis. The case for or against high-dosage vitamin D is not proved. More investigation is necessary, but it is worthy of a trial in certain cases. Gold is too dangerous for use in the average case, but it is of unquestionable benefit. In severe or progressive cases, it probably is indicated.

6. Orthopedics. Other than surgical orthopedics, the principal factor is the prevention and correction of deformities by splintage, correct posture, and exercises.

7. Physical Therapy. Heat is the most useful physical agent and is helpful in all its forms. Massage and exercise should be used to strengthen atrophic tissues and increase the function of diseased joints.

"The treatment of arthritis is a complex problem and for best results a well-rounded regimen must be followed combining all the methods of treatment."

The drug **Prostigmine** is coming into popular usage and it is well that all physicians acquaint themselves with this drug. M. H. Seevers in *The Wisconsin Medical Journal* (May, 1941) summarizes our present knowledge as follows:

"The pharmacological actions of prostigmine are qualitatively similar to those of physostigmine, and both drugs are believed to exert their effects by inhibiting the esterase which effects the hydrolysis and inactivation of acetylcholine. Although prostigmine is generally preferred for systemic administration, since the side actions are less pronounced, its toxicity is equal to that of physostigmine and its use demands the same caution. Atropine is the pharmacological antagonist of its muscarinic actions, as with physostigmine. It should be pointed out that a considerable discrepancy exists between the oral and parenteral doses of this drug.

"For intramuscular or subcutaneous administration, prostigmine, methylsulfate N. N. R. is dispensed in 1 cc. ampules containing 0.25 mg. (1:4,000 solution) or 0.5 mg. (1:2,000). The usual dosage range is from 0.5 to 2.0 mg. For oral administration, a much larger amount is required to produce equivalent results. It is common practice to administer one or two 15 mg. tablets of prostigmine bromide N. N. R.

The evidence indicates that a larger oral dose is possible because absorption is slow. If the rate of intestinal absorption is enhanced, these larger amounts of the drug may prove toxic. Recent evidence indicates that the kidney plays a considerable role in the detoxification of the drug.

"Prostigmine is of some value in the relief of abdominal distention. Those who use it in the treatment of paralytic ileus claim it has few side actions, such as miosis, arterial hypotension, bradycardia, and bronchospasm. If an effective action is obtained, peristalsis should commence ten to thirty minutes after the subcutaneous administration of 0.5 to 1.0 mg. of the methylsulfate. The drug is best used in conjunction with a small, low enema or the rectal tube. For prolonged action, short of the production of hyperperistalsis, 0.25 mg. every four to six hours sometimes serves to maintain normal intestinal tone during the first two or three postoperative days. The drug may also be useful in a similar fashion to increase the tone of the detrusor muscle of the urinary bladder postoperatively.

"The great value of prostigmine lies in its use in myasthenia gravis. Its action is so specific in this particular myopathy that this drug may be employed as a diagnostic test in doubtful cases. The exact mechanism of its action is not clear. Symptomatic improvement following its use can be correlated definitely with the degree of inactivation of the serum and muscle choline esterase. It is difficult to

understand why physostigmine should not serve equally well but such is not the case.

"A complete transformation is effected in most patients fifteen to thirty minutes after the parenteral administration of the drug. Muscle power returns, and the invalid may become ambulatory and even carry on his work under continued prostigmine therapy. The duration of action is usually four to six hours, and the drug must, therefore, be administered three to six times daily.

"A sufficient experience has now been gained to establish the fact that all subjects do not respond well to continuous prostigmine therapy. It is clear that a certain resistance is acquired so that a progressively greater reduction is the serum esterase activity is necessary in order to maintain the patient symptom-free. In view of this fact some clinicians prefer to rely on other substances which are also of proven value in this condition, such as glycine, ephedrine, guanidine, or the choline esters for the basic therapy and save prostigmine for emergencies. Under any circumstances it is wise to alternate the treatment in such a manner that the acquired resistance to prostigmine is minimized.

"A valuable synergistic or potentiating action exists when ephedrine and prostigmine are used together. This allows an effective action with smaller doses of both drugs than would otherwise be possible. Extreme care should be exercised when prostigmine is administered to asthmatics because of its bronchospastic action."

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AROUND THE STATE

Effort will be made to secure and publish news concerning the activities of individual physicians, and of the various medical societies of the state. Members of the Association, and especially secretaries of county societies, are urged to send in news items to the Editor.

DEATHS

Edna Simpson Valentine, M. D.

Dr. Edna Simpson Valentine for sixteen years Medical Director of the Waverley Sanitarium, died May 1st at the Providence Hospital after an illness of a few days.

Dr. Valentine, a native of Pennsylvania, came to Columbia in 1925 to assume her position at Waverley. She was born November 3, 1882 in Georgeville, Pennsylvania, the daughter of John Martin and Catherine Elizabeth Simpson. She was graduated from the Woman's Medical College of Pennsylvania in 1910, and did graduate work at Tulane University before serving as psychiatrist on the staff of Topeka State Hospital in Kansas.

She was a member of the American Medical Association, South Carolina Medical Association, Columbia Medical Society and the Business and Professional Women's Club.

In her passing the profession has lost a valued member, and her place with the mentally sick will be hard to fill.

Willard Clifton Hearin, M. D.

Dr. Willard Clifton Hearin, member of the Greenville County Medical Society for the past fifteen years, died suddenly on July 9th. Dr. Hearin has been an active and honored member of the Society, having served as its President several years ago. He was quite active in the practice of medicine and has been particularly interested in obstetrics and gynecology since his location in Greenville. Dr. Hearin was a member of the Medical Corps in the World War, serving both with the Army in France and the Army of Occupation after the armistice. He is survived by his wife, Mrs. Eunice Bristow Hearin, a member of one of Greenville's distinguished families, and by one son, Willard Clifford Hearin, Jr., now a medical student at Tulane University.

The following account of the Cleveland meeting of the American Medical Association written by Dr. J. W. Jervy, Jr., appeared in the Bulletin of the Greenville County Medical Society and is so interesting that we are presenting it in full.

"The Governor of Ohio could talk rings around any radio announcer I've ever heard; and he is as handsome as Hollywood could desire. He got us off to a good start.

Anyone who did not attend the official opening of the A. M. A. Convention on Tuesday evening, in the tremendous music hall of the Cleveland Public Auditorium, really missed one of the best things about this year's meeting. Dr. Ewing was presented with the Association's Annual Scientific Award; and replied in a brief and gracious speech, giving the credit of his achievements to his associates. The outstanding event, was of course, the address by Dr. Lahey, the incoming President. I remember his speech especially for two conspicuous ideas, although the entire composition was pregnant with good common sense; and was received enthusiastically by some two thousand persons present. He stressed, among other things, the need for arranging some way for teachers in medical schools to keep in better touch with clinical medicine. In closing, he devoted some little time to upholding the National Administration's foreign policy; and in so doing he was given a tremendous ovation.

Registration was something over eight thousand. These, with attending wives, taxed Cleveland's capacity to the limit. I had decided on going only six weeks before the meeting; but had to be content with a tiny little room aboard a lake steamer tied up at the dock. A place to sleep, indeed, but that was about all that could be recognized of the usual comforts of home. Tuesday and Wednesday were miserably cold rainy days. The wind, blowing in from the Lake, made playthings of southern summer clothes, and near casualties of their wearers.

The commercial exhibits were up to their usual standard, taking up the entire basement of the auditorium, a space of some 150,000 square feet. I have long since learned that without more than an iron constitution and two extra days to give to it, you just need not try to see all the commercial exhibits. Oldsmobile was on display as usual; but I've wasted so much time on taking chances in the past few years, that I didn't even sign up this time. Now I'm having nightmares at the thought of what I might possibly be missing.

There were, of course, many excellent scientific exhibits. An elaborate display of fracture methods drew huge crowds who ogled at demonstrations of methods of reduction, plaster applications, traction, and other orthopedic procedures. Of special interest, was Baylor University's exhibit of concentrated blood plasma, and the method of its manufacture; simple when you know how, and if you have the proper equipment. I was particularly interested in Dr. Gordon New's demonstration of plastic repair of facial wounds, and fractures of the facial bones, and methods for their correction. He had a most extraordinary and interesting number of wax models of the skull, showing in detail the various displacements encountered, and the steps in bringing about reduction and healing.

There was a tremendous display occupying four or five large booths on "back pain," with discussions on etiology, examination of the patient, pathology, and treatment—surgical and otherwise. Being a more or less chronic sufferer myself, I devoted a good deal of time to this exhibit; but arrived at the conclusion that I'm not yet badly enough off to submit to fusion. And there just isn't anything new about the whole business anyway; except the attack that might hit you tomorrow if you are not awfully careful how you get out of bed or the bathtub.

I denied myself many other pleasures and privileges to attend the section meetings on ophthalmology and otolaryngology. One paper, at least, was of sufficient general interest to report at this time. In it the author, Dr. Holinger, of Chicago, emphasized the fact that oxygen, which is so often and so carelessly used in our acute upper respiratory infections,

especially in laryngo-tracheo-bronchitis, is a definitely drying agent. What is generally needed is an expectorant; and nothing in this respect appears to be quite so good as carbon dioxide. Humidity is important; but it is less effective when accompanied by excessive heat with which it is nearly always associated in the methods commonly employed. Suction through the tracheotomy tube should not be routinely used; and bronchoscopy should be a last resort. The sulfonamides have been disappointing. A plea was made for early reference to, or consultation with, the otolaryngologist.

It was a pleasure to meet old friends, make some new acquaintances, and to swap ideas with the old and the new. It seems to me more and more obvious, as I talk with those who are giving real thought to the matter, that our old ideas of focal infection and the bacterial origin of disease, simply do not answer adequately the problems with which we are confronted. We shall and must, come to a clearer understanding of physiology gone haywire. New methods of treatment, invoking the aid of nutrition and biochemistry, must be evolved before we are going to accomplish the desired results in many of our patients."

NEWS FROM FORT JACKSON

(Prepared especially for the Journal by the Public Relations Office).

South Carolina doctors, now in the service of the United States Army, have played a major part in shaping the remarkable health record of the 30th Division personnel during recent Second Army maneuvers in Tennessee and also in garrison at Fort Jackson.

Of the 131 officers of the Old Hickory division's medical department at the post, ten were formerly practicing physicians in South Carolina. Six of these are with the medical detachment of the Palmetto State's regiment of the line—the 118th Infantry. One serves with the 105th Medical Regiment and three with the 105th Quartermaster regiment's medical detachment.

Lt. Col. Isador Schayer, a resident of Columbia, S. C., and Major Lewis S. Miles of Summerville head the 118th's regimental

detachment, which includes three Columbia physicians and one dentist: Captain W. T. Barron, Capt. B. S. Chappel, Captain R. S. Matthews and Captain George C. Hart, D. C.

Major J. C. Buchanan, Jr., of Winnsboro, S. C., is with the 105th Quartermaster medical detachment. Captain James W. Fouché and Captain George L. Epps, both of Columbia, are also with this unit.

First Lieutenant John B. Cousar of Bishopville, S. C., is a member of Co. "A," 105th Medical Regiment.

These men, as officers, are part of a military organization which numbers 1358 enlisted men, 91 medical doctors, 23 dentists, one veterinarian, 14 administrative officers, 2 chaplains and one warrant officer. While it is not concerned with combat tactics in the field, its importance to the division personnel is inestimable.

During month-long defense tests in Tennessee, from which the 19,000 men of the Old Hickory division returned on July 1, the medical department of the unit received its acid test. Away from the familiar surroundings and equipment of the modern post that is Fort Jackson, the entire medical personnel responded with wonderful results in their work with men in the field.

The sick rate for the division from all causes during the month of May averaged 1.3% whereas the sick rate during the month of June, which was the period spent in the maneuver area, was 1.7%.

This record, maintained during periods which corresponded as nearly as possible to actual wartime conditions, is considered outstanding. It shows not only the work of the department in the field, but gives an equally clear picture of the work done previously in keeping field soldiers in a state of health whereby they were able to successfully negotiate a maneuver which called for long, grueling marches, strange climate, carrying on through rain and dust and burning sunlight, and oftentimes sleeping on wet ground with very little protection.

The following is a statement prepared by Captain C. E. Green, administrative officer, for Col. Hodge A. Newell, division surgeon, in which the medical service of the division

during the Second Army maneuvers is explained.

"Each serial of the division was accompanied by medical officers to and from Camp Forrest (railhead of the maneuver area) during the movement of the division. In addition to providing medical attention en route, the medical officers also supervised sanitation.

"Medical service during the maneuver period was accomplished in the following manner: Company aid men located casualties (disease and injury) which casualties were transported to collecting stations by litter bearers at which point ambulances of this division transported the patients to the division clearing station. If the illness or injury was of a minor nature, the patients were cared for at the division clearing station, and subsequently returned to their organizations. If the disease or injury was of a more serious nature the patients were further evacuated by ambulance to the army clearing station or Station Hospital, Camp Forrest, Tennessee, depending on the seriousness of their condition.

"Strict adherence to sanitary regulations was observed by all units in the maneuver area. Drinking water was purified by the 105th Engineers Regiment and was the only water used for drinking purposes.

"Purchase of soft drinks was prohibited from other than authorized sources. Attempt of sale of drinks and candies by local individuals in the area presented the greatest problem from a health standpoint.

"Upon leaving maneuver areas, garbage pits and latrines were properly closed and marked and all the areas carefully policed."

This system of medical service was carried out throughout the entire division by means of medical detachments and the 105th Medical Regiments. All regimental detachments are similar in organization to that of the infantry, which has 96 enlisted men, eight doctors and two dentists, and which places at least two members of the unit with each company of the regiment.

In this way, medical attention is always available, whether the regiments be in the field or on garrison duty, and is spread out to give service of at least capable first aid nature to the individual soldier at any time.

Society Reports

The Edisto Medical Society held their June meeting at Pee Dee Lake near Holly Hill, S. C. Drs. C. I. Goodwin and J. H. Danner were hosts at a fish supper. Mr. Charles M. Brice spoke to the members of the Society on the **Development of the Santee-Cooper Project**.

Dr. William Weston, Jr., of Columbia, addressed the June meeting of the Kershaw County Medical Society on **Diarrheas**.

At the June meeting of the Greenville County Medical Society Dr. Paul H. Ringer of Asheville, President of the Southern Medical Association was the guest speaker and his subject was **Medical Jurisprudence**. Dr. F. Webb Griffith of Asheville, President of the North Carolina Medical Association, was also present and spoke briefly.

The July meeting of the Columbia Medical Society was held at the South Carolina Sanatorium, State Park. Interesting clinical cases were presented by members of the staff

and Colonel W. H. Moncrief, Superintendent, gave a short talk.

The July meeting of the Oconee Medical Society was held at the Oconee County Hospital. Dr. S. H. Haddock of Anderson spoke on **Management of Diarrheas in Infancy** and Dr. R. F. Zeigler of Seneca on **Tuberculous Meningitis**.

The Florence County Medical Society met on July 8th. Dr. W. R. Barron of Columbia discussed **Prostatic Surgery** as it concerns the general practitioner. Dr. Barney Heyward of Columbia also spoke briefly.

Dr. Warren White of Greenville was the guest speaker at the Union County Medical Society. At this meeting Dr. R. R. Berry was elected Secretary to fill the unexpired term of Dr. A. H. Stevens.

At the monthly meeting of the Medical Society of South Carolina Dr. William J. Ball gave a case report on **Congenital Heart Disease** and Dr. Edward F. Parker a paper on **Present Knowledge of Shock**.

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NEWS ITEMS

Dr. and Mrs. W. L. Pressly of Due West, spent their vacation traveling in Canada.

Dr. James C. Brabham, formerly Health Director of Colleton County has assumed his duties as Director of the Health Departments in Laurens and Union Counties. His address is Union, S. C.

Dr. Harry F. Wilson of the State Board of Health has been ordered to active duty and has been assigned to Fort Meade, Maryland. Dr. Wilson is a Major in the Medical Reserve Corps.

Dr. A. H. Stevens of Union has been called for Military Service.

Dr. W. Lamar Bryan and his wife Dr. Margaret S. Bryan will serve as temporary physicians for the University of South Carolina until the return of Dr. E. H. Law, University Physician since 1937, from the Army. Dr. Lamar Bryan is a native of Conway, S. C. while Dr. Margaret Bryan is a native of New Orleans, La.

Dr. Roderick McDonald of Rock Hill is spending several weeks at New Haven, Conn., where he is taking special work in ophthalmology.

Dr. John Timmons of Columbia, son of Dr. and Mrs. H. L. Timmons, has gone to South America on a fellowship in tropical medicine and surgery. Dr. Timmons is a graduate of Duke University Medical School and has spent the last two years at the Henry Ford Hospital.

Dr. George Truluck of Orangeburg, President of the State Association and Dr. A. L. Black of Bowman, visited the Newberry County Medical Society at their last meeting.

Dr. F. P. Coleman of Columbia has been made a member of the American Society of Thoracic Surgeons.

Dr. William M. Fox of the State Hospital staff has been called to military service.

The University of Georgia School of Medicine is offering an intensive post graduate course in Office Endocrinology for the week of September 15. The

course will be given by Dr. Robert B. Greenblatt and will consist of lectures, conferences and clinics. Detailed information can be secured from Dr. G. L. Kelly, Dean, Augusta, Georgia.

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HOUSE OF DELEGATES

(April 15, 1941, Greenville, S. C.)

(Continued from July issue)

One of the most difficult functions is supplied in the Division of Maternal and Child Health. Doctor R. W. Ball, Director (on leave of absence, in military service), Doctor Hilla Sheriff, Assistant Director (Acting Director). Suffice is to say that since 1936 the maternal death rate in South Carolina has been reduced 26 per cent, the still-birth rate has dropped 10.8 per cent, and the infant death rate has declined 9.2 per cent.

The Division of Dental Health, Doctor George H. Bunch, Director, only two years of age as a full division, is performing a splendid service in preventive medicine, especially, of course in relation to children.

Another of the newer divisions is that of Industrial Health, a small but very effective service under Doctor Harry F. Wilson, Director, devoted to the protection of industrial workers particularly, and of recent months practically entirely in the "defense" industries.

Perhaps it would be unfair and incorrect to name the division hardest pressed in recent months but that of Venereal Disease Control, under the direction of Doctor Sedgwick Simons, has met the great and increasing demand in this tremendous field with conspicuous success.

The Division for Crippled Children, under Doctor H. Grady Callison, performs a conspicuous service with success. With its corps of attendant surgeons and the support of lay organizations its efforts on behalf of unfortunates is one of those services of very special nature.

The South Carolina Sanatorium has grown to be one of the major services of the Health Department. A sub-board from the Committee has been set up by reason of the importance of special consideration for it.

Under the able superintendency of Doctor Wm. H. Moncrief, the Sanatorium is an institution to which the State may point with pride. At the present it has been made possible to admit all applicants, but increase in activity of the tuberculosis program makes a question as to how long this status may be maintained.

The interest and aid given in this field by the Tuberculosis Society and other lay groups should be given every consideration by the profession.

The infant division of the Department is that of Cancer Control, under the direction of Doctor C. L.

Guyton. Although yet small in proportions this division enters a field of appeal to important organizations and people. The South Carolina Woman's Field Army of the American Society for the Control of Cancer should be accorded full assistance in its program, which complements the Division. The South Carolina Cancer Commission, a permanent body whose personnel was named by the President of this Association serves in an advisory capacity to the Division. Funds for its operation have come solely from the Federal government thus far, and although sufficient to pay the cost of many indigent cancer patients for a period of six or seven months are not enough to supply the whole demand.

In conclusion, it is important to know that Governor Burnet R. Maybank is wholeheartedly interested in the Health Department and in the development of a "far more comprehensive health program in South Carolina." In his Annual Message to the General Assembly in 1941, he calls attention to the need of enactment of a law to compel acceptance of treatment of venereal diseases, and also of a suitable marriage law.

It hardly need be said that the State Board of Health will actively support such measures as may be properly constructed to serve these purposes.

The Executive Committee certifies to the Association that the Health Department is in an excellent state of organization and function, although unusually pressed by many problems arising from the National "defense" emergency.

Respectfully submitted,

Kenneth M. Lynch, M. D., Chairman.

The President introduced Mrs. John Drake of Bennettsville, Commander in South Carolina of the Woman's Field Army of the American Society for the Control of Cancer, and Mrs. Drake outlined the purposes of the Woman's Field Army and the work it is doing and asked for support and cooperation from the doctors.

Reports of committees were next called for. There was no report on Scientific Work, the Chairman, Dr. J. W. Jervy, Jr., not being present.

Dr. T. A. Pitts stated that Dr. J. McMahan Davis, Chairman of the Committee on Public Policy and Legislation, had asked him to state that the committee had had no work to do this year and therefore had nothing to report.

The report of the Committee on Public Health and Instruction was read by the Chairman, Dr. H. Grady Callison.

*Report of Committee on Public Health and
Instruction
South Carolina Medical Association
April 15, 1941
Greenville, S. C.*

The South Carolina Medical Profession is the State Board of Health and through its elected representatives on the Executive Committee, who in turn are commissioned by the Governor of the State, has control over the public health activities carried on by the State Board of Health. Each of the public health programs sponsored by the State Board of Health has the sanction and support of the medical profession, and it is because of this support and guidance that the health work of the State has expanded so rapidly.

Representatives of the State Board of Health in the field, who are members of the county health personnel, have been increased since the advent of the Social Security Program in 1936. These workers are trained in the specialty of public health and preventive medicine and are instructed never to invade the field of private practice except upon request of members of the medical profession in the particular community. The workers are instructed to refer to private physicians all cases coming for treatment. In instances where patients are unable to bear the expenses of private care, they are referred back to the county health offices and clinics for such care and treatment as they need. These patients must bring with them a written request from the family physician before the needed work is undertaken by the county health officer. As a result of this mutual cooperation, public health work, while progressing, is acting as a stimulus rather than a deterrent to the continuation of the physician-patient relationship.

Programs of the Divisions of the State Board of Health are arranged so as to use to the maximum, services of private physicians. Practically every public health activity depends upon the physicians of the state and it is only through their cooperation that such programs are made operative.

The Division of Tuberculosis Control with its 400 bed hospital, is evidence of the general practitioners interest in public health. The physicians have made and are making full use of the facilities offered by this division, and it is through their cooperation and the educational work carried on by them that tuberculosis, as an incapacitating and decimating disease, has been reduced as much as 75% in the last few decades.

The Division of Epidemiology or preventable diseases, is a field in which the practitioners of medicine play a vital role by reporting diseases weekly. In turn the Division offers aid and assistance from a consultation standpoint in the handling of such communicable diseases as may arise. The control of malaria under the Division of Epidemiology and in cooperation with the Works Progress Ad-

ministration, has become a major activity of the Division. The Santee Cooper Project, Buzzards Roost Project, Rocky River Project and the areas surrounding the military camps of the State all require the services of many engineers and sanitary officers.

The collecting of vital statistics could not be done except through the cooperation of practitioners of medicine throughout the State. During the past year, of 42,662 births reported to the Division, 23,596 bore the signatures of practicing physicians. Of 20,146 death certificates filed, 17,487 were signed by practicing physicians.

The Hygienic Laboratory of the State Board of Health was established to aid the physicians of the State in diagnoses, and to show the progress of patients under specific treatments. This service is free to physicians in the State and it is evident, from statistics, that they are making full use of the laboratory facilities. The national defense program has increased the work of the laboratory almost one hundred percent. As a matter of record, examinations of blood for syphilis sent in by Selective Service, National Youth Administration, and other groups, showed that for the first 8 months of the fiscal year, that particular type of work has increased 66 percent.

The Maternal and Child Health Program which was organized in 1936, is another evidence of cooperation by physicians. Both the pre-natal and well baby clinics under this program are conducted by local practitioners in the communities. During the year a total of 2633 clinics were held with an attendance of 44,690. It is believed that the cooperation of the physicians of the State in such programs has been one of the major factors in the reduction of our maternal and infant mortality in the State. In September of 1940, a Nutritionist Consultant was added to the program. The Nutritionist is making a study of certain cases and offering suggestions as to the proper diet during pregnancy. Arrangements have been made whereby indigent families whose nutrition is under a normal level, will be provided with excess commodities. This program is too young to have produced many results but it is believed that in the course of time benefits will be evident throughout the state.

The Crippled Children's Division of the State Board of Health gives further evidence of aid from the Medical Profession. Physicians refer children to the Division for care, and assist in maintaining the treatment after the cases have been returned to their homes from hospitals. During the last fiscal year more than 600 children were hospitalized and placed in foster homes, accounting for 26,711 days of care. Four thousand six hundred and fifty-six clinic visits were made by 1,546 children. In this connection it is to be noted that approximately 30 diagnostic clinics are held each month of the year in permanent centers easily accessible to crippled

children and are presided over by qualified orthopedic surgeons.

The Venereal Disease program of the State Board of Health has the support and interest of a vast majority of practitioners of the state. No syphilis clinic is established in any county unless it is approved by the local medical profession. These clinics are for the treatment of indigents who otherwise could not be treated. The State Board of Health furnishes drugs free to the physicians of the State for the treatment of all patients regardless of their financial competence. The physicians of the State are taking full advantage of this arrangement and the amount of treatment work being carried on among private patients has increased to major proportions. In many sections of the state clinics for the treatment of syphilis patients are conducted by private physicians who are paid on a fee basis by the State Board of Health. The work of this Division has expanded to the point where now it is not necessary for anyone suffering from a venereal disease to be denied the benefits of treatment.

The Division of Industrial Hygiene offers a consultation service to physicians in industrial centers for the control of industrial diseases and industrial hazards. During the past year a number of industrial conditions were investigated by the Division upon the request of the attending physicians. In each instance the personnel of the Division were able to offer suggestions as to means of remedying the conditions and, upon the adoption of these corrective measures, the conditions were controlled. The State Board of Health has a well equipped laboratory and qualified personnel in charge of this very important work.

Environmental sanitation, one of the most important phases of public health work in South Carolina, is a field which does not conflict with any of the prerogatives of the private practitioner. The sanitary engineers of the State Board of Health are available whenever their services are needed for consultation in regard to sanitation. Municipal and other water supplies of the State are constantly being checked and inspected, suggestions for improving the quality of water and maintaining adequate water supplies are made, new plants are designed and followed through construction. The engineers of this Division are constantly in touch with municipal sewerage plants and offer valuable suggestions as to the maintenance and equipment. In addition to this and through the cooperation of the Works Progress Administration, thousands of sanitary pit privies and hundreds of private sewage disposal plants are installed. All of which tends to create better living conditions in urban and rural sections of the state.

In May, 1940, the Cancer Program which has been organized in 1939, actually began its work. Under this program, physicians refer indigent cancer patients to special clinics for Cancer which were

organized and are operated by local practicing physicians in the communities. The expense of operating these clinics and the expense of hospitalizing and treatment of cancer patients is borne by the State Board of Health with monies provided by the Federal Government. The physicians composing these clinics give their services free of charge. Since the beginning of this program, 652 applications have been approved and 552 have actually appeared for diagnoses and such treatment as was necessary. The enthusiastic response to this program indicates its urgent need and ranks it as one of our most important public health activities.

The Bureau of Rural Sanitation and County Health Work through the field personnel of the individual counties of the State, is concerned with all the programs enumerated in this report. As a matter of fact, the field personnel in a large measure are responsible for the entire public health program of the State. The Dental Division of the State Board of Health was organized as a part of the Maternal and Child Health Divisions in 1936. In July of 1939 it was organized as a Division of Dental Health. In the process of re-organization, the staff has been increased until at the present time there are six full time white dentists, and one part-time colored dentist, a Director and a Secretary. The program is both educational and clinical for pre school, school, and adolescent groups. Educational materials are prepared and distributed to children as well as to adult groups. The dentists on the program inspect the mouth of every child in elementary schools where they visit. Indigent children are given the necessary dental corrections without charge; children from families who are financially able to care for this expense are referred to the family dentist. The personnel of the Dental Division are making strenuous efforts to spread their services throughout the state and are meeting with whole-hearted response in all sections which so far they have been able to visit.

Public Health instruction throughout the State of South Carolina is receiving an increasing amount of attention, both from the official and non-official agencies. The State Board of Health itself operates a motion picture truck which has visited every county of the State. Numerous bulletins and leaflets have been prepared and distributed generally to the public and to professional groups. One of the most interesting of the publications prepared was a Brochure on the State Board of Health, copies of which were distributed to all physicians in the State and to many organizations and individuals.

The Nutritionist added to the program in September of 1940, has held many conferences and sponsored many classes of instruction, with both lay and professional groups, especially with the county health nurses and supporting organizations, such as the Parent Teacher Association, Farm Women's Council, etc. The National Youth Administration, the Works

Progress Administration, the Crippled Children's Society, the Army on Cancer Control, and the Tuberculosis Association, have all presented educational programs to which the lay and professional public have been invited. Much publicity has been given through the individual Divisions on special phases of the public health program of the State. This type of work is on the increase and results are becoming more and more evident. The promotion of public health is a problem which requires the thought and efforts of both private practitioners and public health personnel. The medical profession of the State is making a valuable contribution to this important work and is fulfilling one of its primary functions in the promotion of a better life for the citizens of the State.

Respectfully submitted,
H. Grady Callison, M. D., Chairman,
L. D. Boone, M. D.
R. M. Pollitzer, M. D.
Committee.

The President read a telegram from Mr. C. P. Loran, Secretary-Manager of the Southern Medical Association, sending greetings and good wishes.

Dr. W. H. Poston, Chairman, read the report of the Committee on Medical Economics.

Report of the Committee on Medical Economics

So far as the economic condition of the medical profession in South Carolina is concerned, we need only to look within our own borders for conditions which need correction, the greatest of which is probably a result of unethical practices and a lack of training in medical business methods.

It has been the observation of some of us that young men going out into practice seem to know very little concerning the amount to be charged as fees for services rendered. It is sad to relate that in many instances they care less, for many of them are accused of under bidding in order to get patients, and some are accused of actually soliciting patients outright. I am sure that there is good ground for some of these accusations. The average man going out into practice with little or no business training very often winds up by having paid too dearly for learning what not to do, so far as his economic welfare is concerned.

Another general complaint, which comes from the general practitioner, is that the specialists are none too particular in their dealings with patients referred to them.

Should we not take stock and, while we consider ours a noble profession, should we not also consider it a business which should be supported by the same high ideals which characterize our profession? Upon this will depend our ability to keep abreast of the times and render the type of service expected of us and the securing of an income in keeping with our standing in society and our hopes for financial security in our later years. The importance of our profession, not only from the standpoint of keeping

our constituents well and happy but also on account of the vital part we play in our national affairs, warrants the support of sound business backing.

We offer the following recommendation: That the House of Delegates request the dean and faculty of the Medical College of the State of South Carolina to consider seriously the inclusion of and to incorporate, if possible, a course in medical economics and ethics in the training of medical students.

(Signed) W. H. POSTON, M. D.,
Chairman.

On motion, the report was received as information and the recommendation therein was referred to the Reference Committee.

Dr. R. E. Seibels, Chairman, presented a summary of the report of the Committee on Maternal Welfare.

The President announced that Dr. Frank H. Lahey, President-Elect of the American Medical Association, would address the House of Delegates at its evening session.

Dr. F. E. Kredel, Chairman, read the report of the Committee on Control of Cancer.

Annual Report Cancer Control Committee

The past year has not been marked by great activity on the part of the Cancer Control Committee. Through Dr. Hugh Smith the Greenville Society has purchased an educational film, "Choose to Live," and loaned it to Clemson College for showing throughout the state. Dr. C. R. F. Baker has inaugurated a program of cancer education in Sumter.

Mrs. John Drake of Bennettsville has been very active as Commander of the Women's Field Army. In the interests of cancer education she has travelled 6700 miles, given 67 talks, had 137 appointments and 91 conferences, has distributed 35,000 pieces of literature and procured around 300 inches of publicity during the past year. She has done this vast amount of work at a great loss to herself in time, energy and finances. Funds available have not even covered her expenses.

The medical profession of this state is indebted to Mrs. Drake for this fine work and should support her efforts to raise further funds for its continuance.

A Cancer Exhibit loaned by the American Society for the Control of Cancer is on display at this meeting. The State Board of Health paid the express charges on it since the Committee and the Field Army are financially embarrassed.

F. E. Kredel, Chairman.

The following resolution was presented by Dr. R. E. Seibels, who said he did it at the request of Dr. Jennings, the latter not being able to attend the meeting of the House of Delegates.

"Whereas, the Committee on the Control of Cancer of the South Carolina Medical Association has very happily selected and secured Mrs. John Drake as State Commander of the Women's Field

Army of the American Society for the Control of Cancer; and

"Whereas, Mrs. Drake has given a great deal of time, traveled extensively about the State, spoken widely to various groups, and distributed a large amount of literature in a very active educational campaign against cancer on very limited funds, which are now exhausted; now, therefore,

"BE IT RESOLVED, by the South Carolina Medical Association, that the thanks and commendation of this body be extended to the Committee on Control of Cancer and to Mrs. John Drake, Commander of the Women's Field Army in South Carolina, for their very excellent work; that this body wholeheartedly endorse this campaign; and that we hereby recommend to the General Assembly of South Carolina that an appropriation of funds be made to support this very important work."

On motion, the resolution was adopted.

Dr. J. E. Boone, Chairman, read the report of the Committee on the Prevention and Control of Syphilis, which included a report of the activities of the Division of Venereal Disease Control of the State Board of Health.

House of Delegates

S. C. Medical Association.

Gentlemen:

We herewith submit, for your consideration, a report of developments within the province of Syphilis Control in South Carolina as noted during the twelve months period just ended.

The Division of Venereal Disease Control has continued to function in a most efficient manner under the direction of Dr. Sedgwick Simons, the Director. The amount of work put upon this department has increased to such an extent that it was necessary to have three clerks, a Special Medical Consultant, a general technical worker and three nurse-epidemiologists added to the staff.

During the past year drugs for the treatment of syphilis were distributed free to clinics and private physicians—a grand total of \$52,795.90. It is quite interesting to note that about 73% of all syphilis treated was in the early stage, either primary or secondary.

The expansion of clinics has continued and at the present there are 109 stationery centers, two truck units and one mobile unit, the total number of clinic sites is 162.

We wish to call your attention to the dark field examination service offered by the State Board of Health, last year only 60 was performed, this is a most important laboratory test in early syphilis and it is hoped that all physicians will take advantage of this facility and in this way cases of syphilis will be started on treatment possibly two to three weeks earlier.

The control of syphilis and gonorrhea has been shown to be not only a humanitarian measure but

an important development of efficient manpower in National Defense.

The responsibility for the treatment of infected civilian population is placed on the health department. The opportunities for contact with infected persons are decreased by the repression as far as possible of commercialized and clandestine prostitution. Very little can be accomplished in this line without active support of public opinion.

The physician in private practice has an opportunity not only to serve humanity but also to serve his country through cooperation with health authorities in this National Program.

The demands of national defense has multiplied many times the work upon this department. The General Assembly appropriated only \$30,000 which was to be used only for distribution of free drugs and which was not sufficient to match Federal Funds—being 42% short.

South Carolina cannot afford to pursue a short-sighted policy in not providing adequate funds for a sustained fight against syphilis and gonorrhea. The results already obtained is arousing considerable interest and we believe that public opinion will demand that this program continue to expand and function, until venereal diseases become a negligible problem.

It is a source of gratification to this committee that the physicians throughout the state have shown such splendid cooperation and support. The implied confidence we assure is very much appreciated.

Also the Personnel of this department wishes us to express to you their thanks and appreciation and assure you of their continued interest and best effort for a successful program during the coming year.

J. E. BOONE, M. D., Chairman.

Dr. J. E. Boone, Chairman

Central Committee on the Prevention and Control of Syphilis in South Carolina
Columbia, South Carolina

Dear Doctor Boone:

In accordance with official custom and the required policy of the Central Committee on the Prevention and Control of Syphilis in South Carolina, I herewith submit an extremely short statement—outline of activities and observations of the Division of Venereal Disease Control of the South Carolina State Board of Health for the 12 months calendar period ended February 29, 1941.

Due to certain complicating factors involving the availability of reported information for the month of March until the latter part of April, it is necessary to so arrange the period reported upon in this communication as is indicated. Furthermore, inasmuch as this report must be so drastically condensed as to include a volume of work for a busy department it is necessary that detailed data on the elliptical statement be obtained from this office under other circumstances as may be desired.

Sustained Intensified Cooperability

During the year we have continued to note progressively increased interest on the part of our medical profession, as well as general public, and this condition has been greatly accentuated and enriched by the popular demands of National Defense. The Federal Government during the current fiscal year increased the allotment for Venereal Disease Control work in this State to \$136,400.00 from \$97,285.00 as appropriated during the previous fiscal period which, obviously, represents an increase of \$39,115.00. However, and despite the written report from this Division to the State Budget Commission, the General Assembly saw fit to appropriate only \$30,000.00 for the year (which was "ear-marked" for free antisymphilitic drugs), representing only 42% of the total amount required by the Federal Government for matching purposes. However, and luckily for South Carolina, the Federal Government was sufficiently generous to overlook this difference. Also, local appropriations showed no increase.

Personnel Expansion

The demands of National Defense have multiplied professional demands upon this office. To adjust the situation to a reasonable extent, our clerical personnel has been increased from three to five clerks, and a special medical consultant, a general technical worker and three Nurse-Epidemiologists (for duty in extra-contonment areas) have been added to the Division Staff.

Distribution of Free Drugs

During the previous year drugs were distributed free of charge to private practitioners and to clinics on a basis of request, all local distribution being made through the respective County Health Department. The list of drugs distributed include Neoarsphenamine, Marphasen, Sulpharphenamine, Bismuth Subsalcylate and Mecurial Ointment. In addition to these, clinics were supplied Mixed Treatment tablets for asymptomatic late syphilis, and sulfanilamide tablets for Gonorrhoea, the plan being to distribute sulfathiazole tablets in the immediate future for the treatment of Neisserian infections in the clinics. In terms of dollars and cents the cost of such drugs distributed among private practitioners amounted to a total of \$17,054.53 and to clinics \$35,741.37, or a grand total of \$52,795.90. In terms of dosage these figures represent the following distribution:

*Doses of Free Drugs Distributed
Year just ended*

	Doctors	Clinics
Arsenicals	79,061	241,146
Bismuth	56,664	167,106
Unge. Hydrag.	1,368	1,940
Mix. Rx. Tabs.		522,390
Tab. Sulph. (GC)		93,000

Previous Year

	Doctors	Clinics
Arsenicals	39,413	111,287
Bismuth	42,819	85,570
Unge. Hydrag.	3,180 (106 jars)	7,230 (241 jars)

Clinics

In this cardinal phase of the program, expansion and improvement continue. We now have 109 stationery centers, two county-wide truck units, and one Mobile Unit Traveling by personal automobiles and serving nine centers in four counties. The total number of clinic sites is 162 at which 200 sessions are held each week. Thirty-two per cent of the centers treat syphilis only, 59% treat all venereal diseases, and 9% operate on a miscellaneous basis, treating venerological and non-venerological cases. Ninety-eight and two-tenths per cent of the clinics are under the jurisdiction of the State Board of Health, while 1.8% of them operate under local management. To assist in the expansion and technical operation in the clinics various equipmental materials were again this year supplied in amounts proportionate to available resources. In addition to syringes, needles, jars, trays, sterilizers, etc., each county was applied with a Dare Haemoglobinometer. In terms of dollars and cents the extent of such distribution, in addition to printed forms and the like, amounted to a total of approximately \$12,165.00.

Case Reporting

During the course of the year the extent of case reporting, based entirely on the use of free drugs for the group reported is as follows:

	Private Physicians	Clinics	Grand Total
Syphilis	5,924	13,536	19,460
Gonorrhoea	177	749	926
Lymphopathia Venera	0	0	0
Granuloma Inguinale	4	23	27
Chancroid	13	7	20
Not stated	1	0	1

It is noted that of the syphilis cases reported by physicians, the enormous percentage of 73.06 were listed as primary or secondary, while by clinics the percentage amounted to 51.76, or an average of 58.25 from all treatment sources combined. Considering the fact that these percentages do not include the factor of early latency which would unquestionably elevate the figure still further, it is believed that the element of luetic diagnosis by stage is being seriously overlooked both in the treatment of syphilis as well as in the function of reporting.

Laboratory Diagnostic Developments

We continue to suffer a flagrant dearth of interest on the part of practitioners and clinics in utilization of the dark-field examination service offered and maintained by the Hygienic Laboratory. During

the year a total of only 60 dark-field examinations were performed, of which 23% were reported as positive. As compared with 33 examinations during the previous year yielding a positivity of 25%, the continuation of dark-field "apathy" remains quite evident.

The Laboratory reports continued increase in the number of blood specimens received for examination, and an approximate 20% decrease in the number of spinal fluids as were received during the previous year. Percentages of positivity remain about as usual, this year being 17.4% for blood, and 14.6% for spinal fluids. Likewise, an increase in smears for Gonorrhoea is reported, and the very low percentage of positivity heretofore manifested, continued during the year in question for, of from over 17,400 smears examined, but 5.2% were reported as positive.

The State Board of Health undertook a project involving the examination of bloods obtained on a voluntary basis from Registrants at the time of registration. In this connection, it is interesting to note that over 33,000 men took advantage of the offer and the gross percentage positivity in the group amounted to 15.4% (3.2 amongst whites and 23% amongst negroes, respectively). Thus approximately 13% of all registrants voluntarily presented for blood testing. Also, the Hygienic Laboratory is performing blood-testing on all Selectees examined so that, with the combined addition of this special work among prospective soldiers superimposed upon the normal serological burden, it is readily seen that the total number of blood tests performed by the Laboratory during the year represented a sharp increase over the previous period.

Education

As heretofore, the personnel of this Division have been engaged in an intensive program of education throughout the State inclusive of numbers of lectures and talks before all manner of groups, special radio programs, special news articles, demonstrations, the distribution of large quantities of appropriate literature, etc.

Clinical Substitutionary Assistance

It was the pleasure of Dr. Frank L. Geiger and myself to substitute, in the absence of Health Officers and other Clinicians, in the conduct of clinics, and our Consultant Nurse served often in corresponding nursing activities.

Summary

In addition to the above, the personnel of this Division engaged in numerous other phases of activity in the office and afield, a narration of which is obviously impossible in an abbreviated communication of this particular kind. On the whole, we feel that we have maintained close contact with all phases of

the work and its promotion. We feel that distinct progress continues to be made but the problem of Venereal Disease Control is one of paramount proportions, and continuous united effort on the part of curative and preventive workers, as well as all lay groups and individuals, will be essential to effective results. To this end, we are giving of our best and of our all.

Respectfully,

Sedgwick Simons, M. D., Director

Division of Venereal Disease Control

The report of the Committee on Public Relations was read by Dr. Wm. Weston, Jr., the Chairman.

Report of Chairman

Public Relations Committee S. C. Medical Asso.

There have been six articles forwarded to the publishers for printing.

1. Early Cancer is Curable.
2. What Everyone Should Know About Cancer.
3. Prevention of Diseases.
4. Pneumonia and the Common Cold, Part One.
5. Pneumonia and the Common Cold, Part Two.
6. A Doctor Looks at Wrecks.

There are two more on hand which will be given to the next Chairman ready for publication. The response from the members of the South Carolina Medical Association has not been as desired. There has been practically no articles forwarded to our committee.

The South Carolina State Board of Health has kindly mimeographed copies of the articles free of charge thus far.

Financial Report

This chairman has borne the secretarial expense and the expense for mailing to 88 papers in the State. There is \$84.00 on hand and in the bank. Cost of stamps \$23.40.

I am asking that you relieve me as chairman of this committee and I urge the incoming president to select a chairman who will be most cooperative and active.

Delegates and members of the South Carolina Medical Association, I wish to emphasize the importance of this committee. It is a liaison group between the people and the doctors. It can do an infinite amount of good but it can also do harm.

I wish to thank the President Dr. W. L. Pressly and Doctor Douglas Jennings for the active support of this committee.

Respectfully submitted,

William Weston, Jr., M. D., Chairman.

Dr. J. I. Waring, Chairman, read the report of the Committee on Historical Medicine.

Report of the Committee on Historical Medicine of the South Carolina Medical Association

During the past year, the Committee has continued to collect such material as became available and

has purchased a number of items with the funds provided by the Council at the last annual meeting. The papers and books of the Committee are still housed in the Library of the Medical College, through the courtesy of the Library Committee.

During the year, a preliminary draft of the first chapter of "A Brief History of Medicine in South Carolina" has been prepared and the Committee has considered various means of publishing this material, when it is finally corrected.

Your Committee still has not expended all of the money allotted to it, but would strongly urge that some small annual appropriation be made, so that any historical material which might be only temporarily obtainable can be acquired for a permanent collection of data relating to the history of medicine in this State.

The Committee is still most anxious to obtain material from all parts of the State, but so far has had very little contribution of such matter.

During the year, the Committee has been depleted by the death of Dr. Hines, whose sincere interest in the historical side of medicine, as in other phases, is well known to you all. The Committee feels that it has lost a most valuable member.

There was no report from the Committee on the Medical College of the State of South Carolina, Dr. L. M. Stokes, the Chairman, not being present.

Dr. Kenneth M. Lynch, President of the South Carolina Cancer Commission, was called upon and said that in view of the report made by the Committee on the Control of Cancer he thought it unnecessary for him to present anything on behalf of the Cancer Commission.

Dr. A. Earle Boozer, Secretary of the State Board of Medical Examiners, presented the following report:

Report of the State Board of Medical Examiners of S. C.

Applicants for Examination

Doctors, June Examination 40, November Examination 1, Total 41.

The Board met at Columbia, S. C. in June and November, 1940 to tabulate grades made by applicants at the June and November examinations with the following result: passed 41, failed 0. The following schools were represented: Emory 1, Jefferson 1, Johns Hopkins 1, Loyola 1, P. & S. N. Y. 1, S. C. Med. Col. 32, Tulane 1, Univ. Neb. 1, Univ. Pa. 2, 18 licenses were granted by reciprocity as follows: Alabama 1, Georgia 3, North Carolina 6, Ohio 2, Oklahoma 1, Pennsylvania 2, Tennessee 1, Virginia 1, National Board 1.

A. Earle Boozer, M. D., Secretary.

At this point, at five-thirty o'clock, p. m., the House of Delegates adjourned until eight p. m.

Evening Session

The evening session of the House of Delegates was held in the ballroom of the Poinsett Hotel and was called to order at eight-twenty o'clock by the President, Dr. Pressly.

Dr. E. M. Dibble, President of the Board of Medical Examiners, presented a resolution adopted by the Board at its session on Tuesday afternoon, as follows:

Resolution Presented by Board of Medical Examiners

"BE IT RESOLVED, that the Board of Medical Examiners of South Carolina wishes to commend the trustees, dean, and faculty of the Medical College of the State of South Carolina for the excellence of the training and the fine standards of scholarship maintained by the Medical College and for its fine selection of candidates for the degree of doctor of medicine."

Dr. William Weston, Columbia, moved the adoption of the resolution by a rising vote and this motion was seconded and carried.

The President called for the final report of the Credentials Committee, and Dr. Roderick McDonald, the Chairman, stated that there were sixty-six delegates registered and entitled to vote.

President Pressly stated that the election of officers would next be taken up and called for nominations for President-Elect.

Election of Officers

DR. KENNETH M. LYNCH, CHARLESTON:

For about twenty-five years the present occasion has been in the making, and it is to be my pleasure to see a man occupy the position which I have been looking forward for some time to seeing him fill. I think there is no need of and I think there is no point to a flowery oration or nomination for this high office, the highest office the profession of this state has to offer to one of its members. I am going to nominate to you one whom we know, and that is Tom Pitts, for President-Elect of this Association. Dr. Pitts has been one of those among us who have been most frequently seen and sometimes heard, but not voluminously—frequently seen in the deliberations of this organization for a long time. He is an eminent radiologist; I have visited his working quarters many times and I have seen there doctors gathered to consult him. He is well known and highly regarded, not only in his particular field of medicine but by medicine as a whole. He has been a member of our Council, our governing body, for some years and has been its chairman for a while. He is interested in some of the programs you heard about this afternoon, particularly that of cancer control, and has served, particularly in that field in recent times, without thought of himself. He is chairman of the Board of Trustees of the Medical College of the State of South Carolina and is interested in the



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preparation of men for the practice of medicine. He is one to whom you can go for good judgment, one who will lead this organization well, one with whom we can consult freely, and who will carry out the high functions of this office in traditional order.

I present to you, in nomination for President-Elect, Dr. Thomas A. Pitts, of Columbia. (Applause.)

DR. W. S. BETHEA, LATTA:

As delegate from Dillon County, I second the nomination of Dr. Pitts.

DR. D. L. SMITH, SPARTANBURG:

I have known Dr. Pitts for many years. He has been a willing worker in our society; he started off with the legislative committee and did a tremendous amount of work and was watchdog for the society. Since then he has done notable work in the Council. I therefore wish to second the nomination of Dr. Pitts.

DR. WILLIAM WESTON, COLUMBIA:

Mr. President, it has been my great pleasure and privilege to have been associated intimately with Dr. Pitts for a number of years, and I wish to say to you and to this House of Delegates that I have never known a man more consecrated to the medical service than Dr. Pitts. He is a faithful and loyal friend under all circumstances and is a man of extraordinary ability.

DR. RODERICK McDONALD, ROCK HILL:

Mr. President, everything my colleagues have said about Dr. Pitts is true, and I wish to add my second to the nomination.

. . . Dr. Weston moved that the nominations be closed and that the Secretary cast the ballot of the Association for Dr. Pitts as President-Elect. This motion received several seconds and when put to vote was carried unanimously.

PRESIDENT PRESSLY:

I now declare Dr. Thomas A. Pitts elected as President-Elect of the South Carolina Medical Association. (Applause.) I ask Dr. Lynch and Dr. LeSesne Smith to escort Tom to the rostrum so we can look at him.

DR. WILLIAM WESTON, JR., COLUMBIA:

While they are bringing Dr. Pitts up, I wish to say that I saw in The State this morning that Dr. Pitts was born a certain number of years ago today. I think this is his birthday, and I think we ought to wish him many happy returns. (Applause.)

(Dr. Pitts is escorted to the platform.)

PRESIDENT PRESSLY:

I wish to say that the election of Dr. Pitts brings great joy to my heart. I served with him for twelve or fifteen years on the Council and in other capacities in the State Medical Association. I congratulate you, gentlemen, and I wish you a happy birthday, Dr. Pitts. (Applause.)

DR. THOMAS A. PITTS:

Mr. President and friends, this is really the nicest thing that has ever happened to me. No man can receive such an honor without being deeply moved, and really I am. When I heard those men talking about me I really, after a while, began to wonder what it was all about. I did not know I did amount to so much. Then when they came back to escort me up I could hardly believe it. The only time I have ever been honored by an escort of that type, one on each side, has been under a little more dim recollection. (Laughter.) But, joking aside, I realize the seriousness of the future years perhaps as well as anyone else here. Medicine is on trial. It has been convicted in Washington, and that will reflect itself down through all of medicine into the remotest point. With world conflict, with ourselves losing face in the eyes of some people, there is a big task ahead, but one that I will try to do; and with the wise counsel of the older members and the enthusiasm and pep of the younger ones I hope that we shall be able to do the job.

I sincerely thank you. (Applause.)

PRESIDENT PRESSLY:

I am sure that the Association will be in good hands when guided by Dr. Pitts.

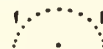
The next officer to be elected is Vice-President, and nominations are now in order.

(To be continued)

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THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

September, 1941

NUMBER 9

Thyroid Disease

FRANK H. LAHEY, M. D.

PRESIDENT, AMERICAN MEDICAL ASSOCIATION
BOSTON, MASSACHUSETTS

It seemed to me that if I could talk to you on the subject of thyroid disease without lantern slides, I could discuss a variety of the aspects of that subject and perhaps could bring you the deductions we have made from our practical experience. About three weeks ago I finished the twenty thousandth goiter that we have operated upon. In this group, 76 per cent have been toxic goiter and the rest non-toxic. Of the toxic goiters, about 60 per cent have been of the exophthalmic type, and the others were adenomatous. As to the results, the incidence of recurrent laryngeal paralysis, including even those cases with cancer in which radical removal was done, is 0.3 per cent. There were six cases of tetany in the 20,000 cases, but the last case of tetany occurred ten years ago. We have practically eliminated the question of tetany and have largely eliminated the question of recurrent laryngeal paralysis by making anatomical dissections and exposures of the recurrent laryngeal nerves in each case.

We have here a patient who has been brought in for me to discuss, who is twelve years of age and who presents almost all of the problems of thyroid disease. She was well until last Christmas, when one of the first things that appeared was prominent eyes. Following that, she developed a tremendous appetite and, after that, marked weight loss, rapid pulse, and all the other signs of hyperthyroidism. She had a metabolic rate of about +60; she was

then put on Lugol's solution, and the rate went down to +30, but when she went to the hospital for operation it had risen to +71. She was in the hospital a considerable time on Lugol's solution and on intravenous glucose; finally, due to the fact that her condition could not be improved, she was operated upon. She had a postoperative storm—a real crisis, I am sure, from the description. Her axillary temperature was 105° F., she was delirious and she perspired profusely. On the other hand, she has never had diarrhea. She is now quite well. I took her pulse an hour ago, and it was 78. She was operated upon three weeks ago.

This case presents several problems: (1) the problem of her eyes, (2) the problem of hyperthyroidism in young people, and (3) the problem of crisis and how it can be met and how it can be avoided. This girl still has some of the eye signs; she still has moderate exophthalmos. But she had gained 5 pounds in weight and is making an excellent recovery.

I think we can use this patient to demonstrate one or two points. She has true exophthalmos, because she has an important sign which distinguishes exophthalmos from normally prominent eyes. As she looks ahead she has a slight area of white sclera visible between her lid edges. The normal prominent eye does not have this edge of visible white sclera between the lid edges. She also has the puffiness of the upper lids which goes with the exophthalmos which is associated with hyperthyroidism in children.

Presented before the S. C. Med. Assoc. April 16, 1941, Greenville, S. C.

We have operated upon 100 children for exophthalmic goiter, of twelve years or younger, the youngest child being two and one-half years old. Exophthalmic goiter in children is the same as in adults, with two exceptions. It is undesirable to produce myxedema in a child. Why is it undesirable to produce myxedema in a child? We must remember this; it is undesirable to produce myxedema in a child and it is undesirable to have hyperthyroidism for a long time. Hypothyroidism slows up epiphyseal closures. Dr. Henry Welti, of Paris, has demonstrated that the prolonged presence of hyperthyroidism in young children hastens epiphyseal closure so that a child of four with hyperthyroidism may have epiphyseal closures corresponding to individuals several years older. Dr. Hurxthal, in our clinic, has done excellent studies on the bone changes and epiphyseal retardation associated with myxedema. We must always remember, therefore, that myxedema, especially in a child, is not a question alone of slowed-up mentality and undesirable physical appearance but also that it does produce undesirable epiphyseal closure changes and mental development because of slowed-up thyroid action.

There are some other things to remember. Children have fluctuating pulses; therefore it becomes difficult to determine the degree of toxicity in a child, due to the fact that its pulse rate is more readily accelerated than is that of an adult. Furthermore, based upon this, we feel that the mortality rate is a little higher in children than in adults, and therefore we feel that in children one is safer in doing more two-stage operations than in adults.

These are the two warnings that I would utter regarding hyperthyroidism in children. But, other than that, hyperthyroidism in children is the same as that of adults.

What can we expect regarding this young lady's exophthalmos? I think we can safely say that in 60 per cent of the cases the exophthalmos will largely disappear following the relief of the hyperthyroidism. In about 20 per cent it will improve. In about 20 per cent it remains about the same and in a small percentage of those will become worse. The very worst type of exophthalmos is that associated

with postoperative myxedema. This young lady, I would say, has a good chance of having her exophthalmos disappear.

Most cases of exophthalmos are probably related, as was originally thought, to smooth-muscle stimulation through the sympathetic system, but in cases due to myxedema, the ocular muscles become so enlarged from infiltration that they will not fit in the bony ocular canal. One thing to watch out for in a case of marked exophthalmos is lid pressure. When the lid pressure begins to pile up the conjunctiva so that it is wrinkled and edematous, they are at a very dangerous stage. We know that the conjunctiva is nurtured by osmosis and thus it will not stand much in the way of interference with its nourishment. If slough should occur, the eye would have to be enucleated. If there is piling up of the conjunctiva you should immediately consider the question of decompression of the bony ocular canal by means of the Naffziger operation. In this operation one turns down the parietal bone flaps simultaneously on either side, one neurosurgeon working on each side. The frontal lobes are elevated and the bony roof of the ocular canal rongeuired completely away, thus allowing plenty of room for the large ocular muscles to bulge upward and to allow the eyes to recede.

We have felt in the past that we could materially improve patient's appearance with this operation, but we have come now to feel that this Naffziger operation is justifiable only where there is danger of patients losing their eyes. The results so far as cosmetic appearances have gone have not been sufficiently satisfactory to advise it solely for that purpose, but the results as far as saving the eyes is concerned have been entirely satisfactory.

This patient shows a fine result, and she represents very well the problem of hyperthyroidism in a child. I will defer the question of management of crisis until later.

I am sure that one of the things you would like to know from me is what I think about basal metabolism and whether we think that basal metabolism determination is essential to the proper management of thyroid disease. We do, with certain qualifications. I would say that there are many possible errors related to the

question of basal metabolism. There are errors, particularly, on account of adjustment of the patient; there are errors of computation, and there are errors which can be associated with the apparatus. If the soda lime, for instance, becomes slacked it does not absorb carbon dioxide. If it becomes channeled, the expired air does not pass through the soda lime, the carbon dioxide is not extracted, and an improper test will result. When the clinical signs are not in accord with the metabolic rates I would prefer to take the clinical signs. We will operate on no case merely on the metabolic reading. If you have a borderline case, that patient should be put in the hospital in bed and a basal metabolic reading should be taken every day for three or four days until the trend of the basal metabolism can be established. If the patient's symptoms are neurogenic instead of thyrogenic in origin, the reading, if high, will tend to come down as she becomes adjusted to the test. If the basal metabolism stays up, then the case is probably thyrogenic. If it varies, and you have one day 40 and the next day 40 and then 60, this latter is probably a false reading. Every basal metabolism apparatus, I would like to emphasize, should be subjected to a test on a normal individual frequently, so you can be sure that the apparatus is functioning correctly.

How do you determine when to operate on a borderline case and when not to? Let me say this; there is no danger of any borderline case of suspected hyperthyroidism dying. He is not that sick. Never operate upon a patient for hyperthyroidism on suspicion. Send the patient home and see him again in six weeks. If you are still uncertain, send him home and see him again at the end of another six weeks. If he has hyperthyroidism, sooner or later the clinical signs will be so obvious that you will know it is hyperthyroidism. This, I think, is a very important diagnostic point.

Do not feel that a patient with hyperthyroidism must have a goiter. You can have hyperthyroidism, particularly in the elderly, with a very small gland, even smaller than normal. But the one thing that should make you suspicious that hyperthyroidism does not exist is a soft thyroid gland, because hyper-

thyroidism is associated with hyperplasia, and hyperplasia produces firmness of the gland, and firmness of the gland in a person with suspected hyperthyroidism is very suggestive of it.

Various complications may be present with thyroid diseases, and perhaps the outstanding one is the presence of diabetes with hyperthyroidism. There is no more desirable complication, from the standpoint of diabetes, than hyperthyroidism. If I had diabetes there are two complications I should like to have. One is gallstones and one is hyperthyroidism,—the first because I could have a surgical operation that would influence the diabetes, and the second because with hyperthyroidism you have an increased metabolic rate and there will be a decrease in carbohydrate tolerance which can be overcome by subtotal thyroidectomy and lowering of metabolism. We have now operated upon over 350 cases of hyperthyroidism with diabetes, and the average increase in the carbohydrate tolerance after operation is 40 gm. We, therefore, believe that diabetic patients with hyperthyroidism should be operated upon very promptly. Because diabetes increases the surgical risk, one should be more careful with such patients.

Another complication is pregnancy. It used to be thought that the thing to do was to relieve the pregnancy by emptying the uterus, but we know from our experience that the thing we should do is to remove the hyperthyroidism by surgery. Do the subtotal thyroidectomy early, so that by the time the patient comes to labor she is well over the hyperthyroidism and can take an anesthetic and can stand a long labor if it occurs. We have operated upon a number of patients with pregnancy and hyperthyroidism and have had only one miscarriage, and that was a patient who had a 200 mile automobile ride home ten days after the operation.

Another complication is heart disease. Throughout medical literature it has appeared for years that there is such a thing as "thyroid heart." There is no such thing as a thyroid heart. You can have hyperthyroidism indefinitely without any damage to the musculature. We know that hyperthyroidism, with its

rapid heart rate, predisposes to cardiac irregularities, with fibrillation, and we know that removal of the hyperthyroidism will restore the heart, if the fibrillation is transient, to its normal rhythm. Exclusive of irregularities, there is no heart damage in hyperthyroidism. On the other hand, when we have a heart already damaged and then superimpose hyperthyroidism we have an ideal factor to produce lack of compensation. The irregularity, with its haphazard beats, disturbs the rest period of the heart and the compensation is broken. We have now operated upon well over 300 hyperthyroid cases with advanced decompensation. Some have had bloody sputum, and some have had to be tapped. All of these patients have had all the medical measures to completely restore compensation, without success. All have been operated upon under a general anesthetic. The mortality rate in the entire series is 3.6 per cent. We have followed a group of these patients for from seven to seventeen years, and in 75 per cent of these patients who are alive the heart is still regular, without auricular fibrillation, which means that they have regained and retained their compensation to this time.

Let me urge upon you something I have always stressed in hyperthyroidism and heart failure: That is that heart failure does not occur in young people such as this little girl whom we have just seen because they do not have associated heart damage as a rule at their age. It is young people who have the textbook picture of hyperthyroidism, who have exophthalmos, who have the hot, flushed skin, the increased activity, the tremulous hands, the bounding pulse, the prominent precordial thrusts. They are the ones in whom you and I could make the diagnosis from across the street. But they do not tend to have failure, so one does not get that type of hyperthyroidism often in thyrocardiacs to make the diagnosis easy.

There is another type which I have called apathetic hyperthyroidism in which there is lack of the eye signs and lack of heat and moisture in the skin—a chronic low-grade type of hyperthyroidism in elderly people. Elderly people do not have the nervous system, do

not have the vascular system, do not have the musculature with which to react to high metabolic rates, so they are often calm and their skin often cool with this state. With an absence of eye signs and with the edema and the orthopnea which is so often urgent, your attention is focused on the decompensation, you lose sight of the cause of the decompensation and because of the atypical apathetic type of hyperthyroidism, you fail to make the diagnosis. Let me urge, therefore, if you have a patient with the chronic type of decompensation who does not die and yet who does not completely regain his compensation, that you be suspicious that the underlying factor producing the decompensation is an apathetic type of hyperthyroidism. If you have a patient with unexplained weight loss, with unexplained moderately increased basal rate, with an unexplained myasthenia, be suspicious of apathetic hyperthyroidism.

Be cautious surgically with the patient with apathetic hyperthyroidism. They are the ones who appear to be such a good risk that one will be tempted to do the entire subtotal thyroidectomy in one stage. If you had seen this little girl after operation you would have had your hair raised, as Dr. Young expressed it. They feared she would die. She was wildly delirious, she thrashed about in bed, she had an uncountable pulse. But if you have an apathetic hyperthyroidism in a bad postoperative reaction, the patient will go back to bed calmly, will lie quietly, will sink into sleep or stupor, and finally she will calmly die. So you must do the thing beforehand that will make you safe. When you operate upon elderly patient with apathetic hyperthyroidism do a two stage operation, doing a right subtotal hemithyroidectomy, and then have her return in six weeks after she has improved a good deal, to have the other side done.

What can you do in the thyroid crises which sometimes occur and what makes patients die of hyperthyroidism? These patients in thyroid crises die, I am sure, liver deaths. We talk of toxic hyperthyroidism, but hyperthyroidism does not produce a toxin. It increases the rate of combustion. Some unexplained stimulus makes the thyroid gland manufacture thy-

roxine more rapidly than the normal rate. Hyperthyroidism is produced by some stimulative factor which makes the thyroid gland increase the velocity of manufacture of thyroxine. Thyroxine stimulates metabolism; metabolism stimulates combustion; and they particularly burn up the protective elements in the liver. We do not know how many liver functions there are, but we can name two that we can demonstrate. There is the glycogenic function demonstrated by the hippuric acid excretion test. We know that the normal excretion of hippuric acid is 3 gm. after the ingestion of 1.6 gms. of sodium benzoate by mouth; in a group of patients with severe hyperthyroidism the hippuric acid excretion has been reduced to 1.8 gm. We know that, following the relief of hyperthyroidism, as the metabolism goes to normal, so the liver glycogenic function in terms of hippuric acid excretion returns to normal. We know that serum proteins in relation to the proteogenic function of the liver are depressed in hyperthyroidism, and as we operate on these patients and their basal metabolic rate returns to normal, the serum proteins go back to normal.

What has all this to do with this little girl's crisis? When patients with unoperated hyperthyroidism die, they die with high temperatures of over 105° F., they often die with jaundice, they die in delirium and with diarrhea and vomiting. What are they relieved by? They are relieved by the things that improve liver function—blood, glucose, oxygen, fluids. In this state we give them something to burn so that they will not burn the glycogen in the liver. Dr. Elmer C. Bartels, in the medical department of our clinic, has done a fine piece of work in connection with this problem. He has demonstrated that if you give these patients with severe hyperthyroidism 1,000 c. c. of 10 per cent glucose immediately before you operate upon them they do better than if you wait and give it afterwards. Give a very sick child, like this one, 1,000 c. c. twice a day before operation and then give another 1,000 c. c. just before operation, and while his metabolism is being stimulated by operation, he will have something besides himself to burn.

As to postoperative treatment, do not give fluids and glucose—for example, this morning,

this noon, tonight and at midnight, but give it all the time. Put in an indwelling needle in the patient's vein and give fluids and glucose to the patient all the time, day and night, until he is out of the crisis. Give at least 60 drops of glucose solution per minute by means of the glass bell visible dropper, giving at least 500 gm. of glucose in the twenty-four hours. In addition, give him 50 per cent glucose at intervals until he gets up to 500 gm. of glucose in the twenty-four hours. You can drown a patient with glucose and saline if he does not have hyperthyroidism, but you almost cannot drown patients with hyperthyroidism with intravenous fluids because they burn up the glucose and fluids so quickly. So fill them up with fluids, give them glucose and iodine intravenously. Do not try to give iodine by mouth or stomach tube by giving sodium iodide. Put in the intravenous glucose solution 30-50 minims of Lugol's solution and the patient will be sure to get it and its effect promptly.

The best way to treat crises, of course, is to avoid them. The way to do that is to prepare the patient and then do only limited operative procedures at one time.

I have been asked if there is any value in the ligation of the thyroid poles before operation. We have reviewed the charts of 113 patients who had had preliminary thyroid pole ligation. Two-thirds of them showed a post-operative gain in weight and drop in the metabolic rate and pulse rate. If you can be sure that in two-thirds of these patients who are so ill that a fatality is expected as a possibility you can get a drop in the pulse rate and a drop in the metabolic rate and a gain in weight, it is a worth while preliminary operation.

We still have patients sent to us who have almost completely burned themselves up, who have lost 100 pounds, who have dropped down from 175 to 75 pounds or from 165 to 65 pounds. You cannot do one stage thyroidectomies on such patients safely without preliminary pole ligations.

There is another problem I should like to mention. What can you do with the patient severely toxic who has been already saturated with iodine when she comes to you? Do you send that patient home, take her off iodine and

keep her off iodine and then have her come back? No. That patient has become iodine-fast. If you have a patient who has become iodine-fast and send her home off iodine, she may well be so toxic that she will go into a more severe grade of thyroid intoxication, and when she comes back for surgery, she will still not be sensitive to iodine, you will not gain the improvement and you will have a worse situation to deal with. For that reason, in the iodine-fast patient we prefer to do something positive toward limiting the thyroid toxicity. We, therefore, do limited operative procedures in such cases, either preliminary pole ligations or preliminary hemithyroidectomy, thus utilizing stage procedures instead of sending them home to try to get them again sensitive to iodine.

I have repeatedly said that when you have a patient with exophthalmic goiter you should make up your mind whether that patient is going to be operated upon. If you or the patient decide that she is not to be operated upon, give her all the iodine you want, because it does not matter if she becomes iodine-fast. But if you are going to operate upon her, do not give her iodine; send that patient to the surgeon, and he can give the iodine and observe the drop in pulse rate, the drop in metabolism and the gain in weight and select the best time for operating.

The other problem of iodine is this. If you live in a region where there is less than one part of iodine to the billion of water, you will be in a region where goiter is endemic. You must remember that the disadvantages of iodine deficiency are not only human but are animal. The Bureau of Animal Husbandry has shown that in regions where iodine is lacking, pigs are often born without hair, calves are not strong, and colts tend to become knock-kneed.

There are some very interesting statistical figures in relation to iodine reported by Dr. Eggenberger of Herisau, Switzerland. Ten years ago the incidence of goiter in Herisau was 79 per cent. The government then ruled that all cooking and table salt be iodized. At the end of ten years the incidence of goiter had dropped to 9 per cent. But that is not the most interesting result. Recruits had increased

in height $1\frac{1}{2}$ inches. There was a decrease in spina bifida, hare-lip and cleft palate. In regions where iodine is deficient there is more hare-lip, more cleft palate, more spina bifida and closure defects just as there are physical defects in the animals due to lack of metabolic stimulation.

What makes the cretins low in stature and mentally backward? Lack of metabolic stimulation. So we have to think, in children, of the disadvantages of myxedema and the necessity of thyroid-feeding and of making the diagnosis early in order that these children may not suffer permanent bone changes and permanent late closure defects due to lack of metabolic stimulation in addition to permanent lack of cerebral development.

I can demonstrate to you I think pretty well that hyperthyroidism is increased velocity of the manufacture of thyroxine. For instance, I am sure you are all familiar with our studies on blood iodine. We know that the iodine in the blood probably represents the iodine fraction of thyroxine. We know that thyroxine is 65 per cent iodine. We know that if you separate the iodine fraction out of thyroxine it will no longer elevate metabolism. If thyroxine elevates metabolism and if 65 per cent of thyroxine is iodine, if you have an elevated metabolism you should have an elevated blood iodine, and you do except under certain conditions.

In a series of patients who had an average basal metabolism of +43 there was an average blood iodine of 22.8, the normal in our region being 10 micrograms per cent. If you operate upon these patients and bring their basal metabolism to normal, their blood iodine will come to normal. This is the typical state which occurs in patients with hyperthyroidism, but the typical state occurs in only 70 per cent of the cases. It is an interesting fact that in 30 per cent of the cases in which the average basal metabolism is +45, the blood iodine is not elevated but is normal or below normal. If you operate upon these patients, at the end of six months the metabolism will come to normal but the blood iodine will go above normal and it takes it nine months to return to normal. This, I think, is an interesting demonstration

of how the thyroid must increase its velocity of manufacture of thyroxine. If you have a high metabolism and a low blood iodine, and blood iodine represents the iodine fraction of thyroxine, then the only way additional thyroxine can be made is by using the low amount of iodine in the blood over and over more rapidly, that is, increased velocity of manufacture of thyroxine.

We know that it is the patients who have had hyperthyroidism for a long time who tend to be in this 30 per cent atypical group who have elevation in metabolism but a low blood iodine. The explanation of this is similar, we believe, to the explanation of hyperparathyroidism. In hyperparathyroidism demineralization or decalcification of the bones occurs due to the excessive production of parathormone from an adenoma of the parathyroid gland, and so we must have with this disease a high blood calcium. With high blood calcium goes a high urinary output. So if we have a constant relative intake of calcium and a high urinary output, there is established a negative calcium balance which, if it goes on long enough, will deplete the calcium as it extracts it principally from the bone.

The same situation occurs with hyperthyroidism, particularly in those patients who have had the hyperthyroidism for a long time. Early in hyperthyroidism there is a high blood iodine. The intake of iodine is relatively at the same level. With a high blood iodine there is a high urinary output, and as the high urinary output produces a negative iodine balance, eventually there is a depletion of the reserve of iodine until we have a low blood iodine, particularly in those patients who have had hyperthyroidism for a long time. It is in these cases, therefore, that an elevated metabolism we believe can be brought about if it be due to thyroxine solely by an increased velocity of manufacture of thyroxine by utilizing the limited amount of iodine over and over more quickly.

We have always known, long before we had done our laboratory researches on blood iodine, that there were three clinical factors associated with patients who were possible candidates for fatalities if operated upon for hyperthyroidism. These were age, weight loss and

particularly the length of time they have had the disease. Those patients who had had the disease a year or more, we have always known, have been those who were in the dangerous group. It is probably due, therefore, to the fact that there is an increased velocity of manufacture of thyroxine and thus it is possible for these patients to produce a greater amount of thyroxine during their postoperative reactions and thus thyroid crises. In the course of this laboratory investigation two things have been demonstrated which are of real value as relates to the clinical problem of surgery of hyperthyroidism. One is that in the patient with a high metabolism and a low blood iodine, the risk is greater, and we have also learned one other thing and that is that the percentage of recurrent hyperthyroidism is much greater in the patients who have low blood iodine and high metabolism and that in these patients more radical removals of thyroid must be done. In those patients representing the 70 per cent group who have a high blood iodine and a high metabolism, the incidence of recurrent hyperthyroidism is only one-half of 1 per cent, while in those atypical groups representing the 30 per cent of all patients, who have a high metabolic rate but a low blood iodine, there has been an incidence of 22 per cent of recurrent hyperthyroidism before we knew in which group to do very radical removals. This laboratory measure, therefore, is of value as relates to these two points.

I urge that we all realize that one of the things which kill patients with exophthalmic goiter, in surgery, is anoxemia. If you get a patient on the operating table who is very toxic and who has breathing difficulties, mucus, laryngeal spasms, tracheal obstructions, if this goes on for a considerable period of time, that may be a very prominent mortality factor in patients with hyperthyroidism, and it does not need to be. It does not need to be because you can overcome it mechanically. I never operate on a patient for exophthalmic goiter without introducing an intratracheal catheter. That eliminates the danger of anoxemia. With that in place, you cannot have tracheal collapse and cannot have laryngeal spasm. That is a mechanical method for eliminating one of the

factors, anoxemia, that tends to produce fatalities.

We have all been pleased with cyclopropane. There is a grave danger, however, with this anesthetic, particularly in patients with hyperthyroidism, of death from ventricular fibrillation. Cyclopropane is an ideal anesthetic for patients with toxic goiter aside from its explosive danger. It is ideal for thyroid operations because of the high percentage of oxygen used with it (85 per cent). But there is the danger particularly with this anesthetic, of a sudden table fatality from ventricular fibrillation in the toxic-goiter patient with a heart lesion. We have had two such deaths. There is no question in our minds after having given cyclopropane anesthesia in several thousand of these goiter patients that hyperthyroidism, and especially hyperthyroidism with cardiac damage, particularly sensitizes these hearts to cyclopropane and raises always the very serious possibility of a death from a ventricular fibrillation.

If cyclopropane, therefore, is given in toxic thyroid patients, one should be very careful that they are not carried to depths, because in depths of anesthesia cardiac irregularities and ventricular fibrillation are more apt to occur. It is particularly desirable in the patients with hyperthyroidism and particularly those who have hyperthyroidism and cardiac damage, if cyclopropane be given, that it be well diluted with nitrous oxide, ethylene or even with ether, and may I again urge, whether patients have hyperthyroidism or cardiac damage, that it is never wise to carry patients with this anesthetic into depths of anesthesia.

Another warning as relates to the surgical management of hyperthyroidism and anoxemia is that of tracheotomy. Many times following operation, patients go back to bed, have difficulty in breathing and become a little cyanotic. Do not hesitate to do a tracheotomy on any patient with hyperthyroidism if they are not getting enough oxygen. Never let dusky patients who have been operated upon for hyperthyroidism go through the night inadequately supplied with oxygen. As a result of this they will be semi-drowsy and semi-comatose in the morning. You will then do a tracheotomy when it is too late and will lose the patient.

Never finish a thyroid operation, if you would follow our warnings as a result of our own experience, without taking all of the thyroid isthmus off and exposing the trachea. If the trachea is exposed, you will take off an adequate amount of thyroid tissue, and if it is not, it will be difficult for you to get an adequate amount off, but even more important than that, if the patient does require a tracheotomy, the trachea will be where it can be done easily. If you have to do an emergency tracheotomy, it is no time to be controlling the bleeding from the isthmus of the thyroid. We, therefore, feel that in every thyroid operation, both from the point of view of removing an adequate amount of thyroid tissue and the ease with which a tracheotomy can be done if it becomes necessary, the isthmus should be removed and the trachea completely bared.

As relates to doing tracheotomy, the easiest place to do a tracheotomy is at the junction of the cricoid cartilage and trachea. This is where the trachea is most easily approached, but it is also the point where the trachea is narrowest, and if a tracheotomy is done here, there is often stricturing and narrowing afterwards that makes closure of the tracheotomy opening difficult. Do tracheotomy wounds well below the isthmus and at a low level where the trachea is wide, and there will then be no difficulty in spontaneous closure.

One of the most dangerous thyroid states is that of the discrete adenoma of the thyroid. Practically all carcinomas of the thyroid arise in a discrete adenoma. Discrete adenomas are often small, they are often not unsightly, they often do not cause pressure and for that reason many patients with small, discrete adenomas are told that they do not need to worry about them. One in every sixteen of the discrete adenomas which we remove shows signs of malignancy whether or not we think they are malignant before the patients are operated upon. There are certain things that one can say regarding malignant degeneration in discrete adenomas of the thyroid. In general, it can be said that as long as the carcinoma is within the capsule of the adenoma, there will not be lymphatic metastasis. There may be blood borne metastases but these do not occur

in large numbers. We, therefore, feel that since practically all cancers of the thyroid arise in a discrete adenoma, since one in every sixteen is malignant when it is removed, they should all be taken out. We used to think that you could depend upon youth as a protection against malignant degeneration. We have seen carcinoma of the thyroid in a girl of nine. We used to think that the size of the thyroid was of value in protecting against malignant degeneration. We now know that no matter how small the adenoma is, it can be malignant. We have seen an adenocarcinoma in an adenoma of the thyroid the size of my little fingernail. We therefore believe that every adenoma of the thyroid should be removed. These can be removed practically without mortality, and this is the ideal way to approach malignancy, in its precancerous stage.

We used to think, and almost everyone did, that carcinoma of the thyroid was quite hopeless. In addition to that, everyone used to treat carcinoma of the thyroid by attempting radical removal of the entire thyroid. We now combine surgery and radiation, and by means of this we have accomplished excellent results. There are three grades of thyroid malignancy. Grade 1 is made up of papillary cystadenomas, malignant. In a series of cases followed, 62

per cent of the patients with malignant papillary cystadenomas, after radical removal and intensive X-ray treatment, are alive and well without recurrence over five years. Grade 2 is made up of papillary adenocarcinomas and alveolar adenocarcinomas. In a series of these followed over a period of five years, 80 per cent of the patients with papillary adenocarcinoma and 27 per cent of those with alveolar adenocarcinomas are alive and well. Grade 3 is made up of the small round cell carcinomas and the giant cell carcinomas. Of a series of these patients followed over five years, 22 per cent of those with small cell carcinoma and 17 per cent of those with giant cell carcinoma are alive and well. It is therefore evident that cancer of the thyroid is best treated by removal of the adenomas in which most cancers of the thyroid arise, before they become malignant, but after carcinoma has arisen, it is by no means a hopeless group of cases.

I have tried in this talk to present to you deduction from a large personal experience which might be of value not only to those of you who operate upon patients with thyroid disease but to those of you who do not, but see them in your general practice and must make the first-hand decision concerning their diagnosis and surgical or non-surgical management.

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Low Back Pain and Sciatica Caused by Faulty Mechanics at the Lumbosacral Area

DR. G. R. DAWSON
CHARLESTON, S. C.

Introduction

For ten long weeks, flat on my back, I read everything the librarian could bring me on Low Back Pain and Sciatica while recuperating from a spinal fusion to cure my own case. You will be spared 100% of the details of my own case and 99% of the literature. Low back pain and sciatica, while easy to diagnose, is often difficult to explain and frequently impossible to cure by conservative measures. In trying to make a complicated subject simple and short, and to spend most of our time on the bed rock fundamentals, we must of necessity leave out some causes and features of low back and sciatic pain we would like to talk about.

The vast majority of cases of low back and sciatic pain are due to orthopedic conditions. The majority of cases of low back and sciatic pain are due to faulty mechanics at the lumbo-sacral area. Why?

Man was made to walk on all fours. When he assumed the upright position the lumbo-sacral joint became one of the most vulnerable areas to strain. This is where a flexible rod, the segmented spine, supporting considerable portion of the body weight, joins a very stable base, the sacrum and pelvis. Under the best mechanical conditions this is the most vulnerable area of the spine and subjected to the greatest strain. But unfortunately 80% of us have lumbo-sacral anomalies or poor mechanics at the lumbo-sacral area. Lumbo-sacral anomalies produce symptoms only through faulty mechanics. Faulty support, or faulty relationship, produces abnormal stresses or pressures. Whether an anomaly is of faulty support or faulty relationship its mechanical weakness can be compensated by ligaments and muscles. As long as these soft tissues have sufficient strength and tend to meet the conditions with-

out fatigue—no symptoms are present and the patient is compensated.

The following two slides are the most glaring examples of faulty support and faulty relationship I could think of to drive home this point. (Showing slides)

The first slide shows congenital absence of the sacrum. This faulty support must have produced unusual stresses—yet no symptoms were present. The second slide of a scoliosis case have nearly a 90° curve shows an unusual degree of faulty relationship—yet this patient too was asymptomatic. These patients were young—their soft tissues still had sufficient tone and power to meet the unusual stresses thrown upon them. As these two patients recede from their muscle prime they will undoubtedly have symptoms.

Muscles and ligaments that are thus occupied in supporting or protecting the lumbo-sacral area have less than normal capacity for meeting extraneous loads or stresses, as a certain portion of their capacity is already in use. Hence, these tissues are more liable to strain than normal, i. e., their capacity to meet stresses is more likely to be exceeded—in which event the patient is decompensated and must be relieved by rest in order that those injured tissues may recover and regain a state of compensation.

Pathogenesis of Decompensation

Decompensation occurs in several ways.

(1) An excessive or extraneous load may directly produce a strain.

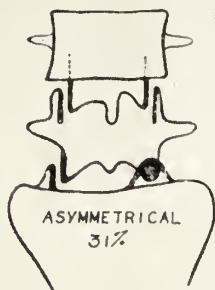
(2) As we grow older our muscles lose tone and power, so that those of us who are well compensated at twenty may at forty have our muscle power exceeded by loads easily cared for at twenty. Thus decompensation is more frequent later in life.

(3) A person's routine may change from an active to a sedentary life. Muscles, which were of good power in an active life, become

Read before South Carolina Medical Association, April, 1941.

FACETS

INTERNAL-EXTERNAL ARE
THE MOST STABLE
12% OF ALL SPINES



BACK + SCIATIC CASES WITH INT-EXT. FACETS
ARE EXTREMELY RARE

ALMOST EVERY INDIVIDUAL POSSESSING
ASYMMETRICAL FACETS HAS SYMPTOMS

TRANSITIONAL LUMBO-SACRAL VERTEBRA



1. ACTS AS LEVER OF SECOND CLASS
2. OCCURS IN 8% OF SPINES

SPONDYLOLISTHESIS



1. DUE TO FAILURE OF UNION OF THE LAMINAE TO THE PEDICLES
2. BODY OF S-1 WIDER THAN NORMAL - DEVELOPMENTAL
3. USUALLY AT 5TH. LUMBAR VERTEBRA
4. OCCURS IN 4% OF CASES

POSTERIOR DISPLACEMENT L 5



1. COMMON — 20% OF CASES
2. FACETS A-P IN MOST CASES
3. BODY OF L5 BROADER THAN NORMAL—DEVELOPMENTAL

LUMBO-SACRAL ANGLE

MAY BE UNSTABLE IN ONE OR BOTH OF 2 WAYS
1. CENTER OF GRAVITY TOO FAR FORWARD
2. SACRAL ANGLE TOO OBLIQUE

- 42° - NORMAL
- 47° - MENACE
- 52° - SEVERE

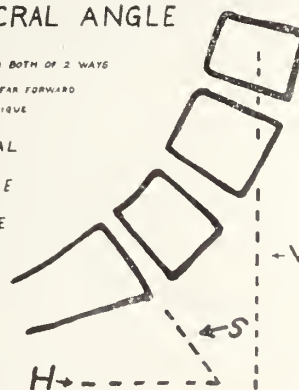


Fig. 1

Fig. 3

Fig. 5

Fig. 2

Fig. 4

Fig. 6

poorer in time in sedentary life and are not able to meet even moderate stresses—and decompensation occurs on a trivial injury. Most women lead a fairly active life up to the time of marriage, but are usually sedentary after. This is the reason backache of lumbo-sacral region is common in women, while laborers who do heavy work with muscles of good tone escape it.

(4) Muscles able to stand a large load where prepared for it may give little resistance if caught unprepared. The individual with lumbo-sacral anomalies may do heavy work with ease—yet develop an acute sprain with a sudden twist or turn for which the protective muscles are not prepared.

(5) Muscles used constantly for protection become fatigued. Fatigued muscles may ache. Thus this is a mild form of decompensation without acute strain, but with low back fatigue. Some patients not having known anything else often do not realize that they are fatigued. These individuals may lead a sedentary life mainly because they do not feel equal to anything else.

Let us take three patients who are examples of the different ways of decompensation.

(1) An All American football player had advanced spondylolisthesis. During his days of athletics his muscles and ligaments were of such tone and power he had no trouble with his back. Later he became a bond salesman, led a sedentary life and, of course, his muscles and ligaments gradually lost their tone and power. In his very early thirties a slight jolt in a taxicab produced an acute strain.

(2) A man in his middle thirties worked steadily as a laborer until he was laid off for three weeks. On returning to work he suffered a lumbo-sacral strain. During his lay-off period his muscles and ligaments had lost tone and power so that they were no longer able to meet stresses with ease as previously. This type of case is frequently seen in these days of interrupted employment.

(3) A robust man could carry a 100 pound pack all day on a hunting trip with ease but he would suffer frequent lumbo-sacral strains if he did not avoid sudden twists and turns.

These are apt to catch his protected muscles unprepared and thus produce a strain.

Unstable Mechanics

The main unstable mechanical arrangements at the lumbo-sacral area will be taken up now. They are all very common—80% of us have one or more of these conditions.

Facets

Sound mechanics, or stability at the lumbo-sacral area depends largely on the lumbo-sacral arch articulations. The best mechanical arrangement is present when the facets are internal—external, i. e., in the sagittal plane.

Here a fair range of motion is allowed in flexion and extension, but very little in rotation. This is clearly seen in both the diagram and in the slide of the X-ray in the antero-posterior view. To find a person suffering from low back pain or sciatica who possesses internal-external lumbo-sacral facets is so rare as to cause considerable comment. I have never seen such a case.

There may be many variations in the facets which may be pitched in various planes from the sagittal to the coronal. They may be irregular, defective, or rudimentary. When the facets are in the coronal plane, called antero-posterior facets, an undue amount of motion is allowed and posterior displacement of the 5th lumbar vertebra is often present.

The worst mechanical arrangement is seen when one facet is anteroposterior and the other is internal-external (Figure 1). With this mechanism every motion puts undue strain on one or other of the facets since they do not operate in the same plane. Practically every individual with grossly asymmetrical facets has symptoms referable to the low back area. Such facets are especially liable to strain on twisting movements and the condition is difficult to combat except by surgery, due to the difficulty of preventing rotary movements.

Transitional Lumbo Sacral Vertebra

A transitional lumbo-sacral vertebra is a common anomaly, occurring in 5% of all spines²². It was present in 10.8% of patients entering the New York Orthopedic Dispensary

and Hospital for low back and sciatic pain.

It may be present on one or both sides. It varies from a slight enlargement of the transverse process of the 5th lumbar vertebra as we see here on one side of this spine to a pseudo-arthritis as we see on the other side of this spine. There may be a complete fusion to the sacral wing. You can see (demonstration with spine and Figure 3) that the impingement of the transverse process here on the sacrum provides a fulcrum for the spinal column and acts as a lever of the second class when the spine is bent to that side, giving unusual leverage to pry open and tear the opposite lumbo-sacral ligaments.

Here in the transitional lumbo-sacral vertebra we see nature starting her gradual fusion of the last lumbar vertebra to the sacrum.

Spondylolisthesis

Spondylolisthesis means "gliding of a vertebra." It usually occurs at the 5th lumbar vertebra. The body of the 5th lumbar vertebra and the entire spine above it slip forward in front of the body of the sacrum (Figure 3).

The spine, laminae and inferior facets are left behind articulating with the sacrum in the usual manner. Spondylolisthesis is due to a failure of union in the laminae between the inferior facet and the pedicle. It is not to be confused with a fracture or a dislocation which it so often is. In spondylolisthesis the congenital defect is present at a site where a fracture has not yet been proved to occur.

The lumbar vertebral body becomes narrower and the sacrum broader in the anteroposterior plane due to developmental strains. Normally the body of the 5th lumbar vertebra is broader than the first sacral body. In spondylolisthesis the first sacrum body is broader than the fifth lumbar vertebra. This indicates the condition has been present a long time. Spondylolisthesis is far more common than is realized and it is missed very frequently. I have seen two new cases in a single day. I know two Orthopedists with spondylolisthesis. Four per cent of general autopsy cases have spondylolisthesis²³. Eight cases of spondylolisthesis were found in examining 150 husky applicants by the Champlain Refining Company.

In the surgical cure the spinal fusion must be extended from the sacrum to the 4th lumbar vertebra for the obvious mechanical reason of the posterior element of the 5th lumbar vertebra not having a bony connection to the remainder of the vertebra.

Failure of operative fusion is more common in this condition than in any other lumbo-sacral anomalies and a special effort should be made to do as perfect a technical operation as is possible and a large amount of small bone chips of cancellous bone should be used as can be utilized.

Posterior Displacement of L5

Posterior displacement of the fifth lumbar vertebra was recognized as a developmental anomaly by Ferguson at the New York Orthopedic Dispensary and Hospital in 1924. It is one of the most common of the significant lumbo-sacral anomalies and is very commonly associated with symptoms. (Figure 4).

In posterior displacements the arch articulations are usually of the anteroposterior type and increased motion is present at the lumbo-sacral joints. The lumbo-sacral angle is usually less than normal. The body of the 5th lumbar vertebra is wider than the normal due to developmental stresses.

The 5th lumbar nerve foraminae are quite a bit smaller than the other lumbar foraminae, yet through them pass the largest of the lumbar nerves. In posterior displacement this small space may be encroached upon and even direct nerve pressure may result between the posterior lip of the 5th lumbar vertebra and the sacral facets. Nerve pressure by a ruptured intervertebral disc or hypertrophied ligamentum flavum is easier of accomplishment here than in any other space.

Unstable Lumbo Sacral Angle

The axis of weight bearing of the body passes anterior to the lumbo-sacral junction. Thus normally there is a constant shearing strain present.

The lumbo-sacral angle may be mechanically unstable in either one or both of two ways. These are illustrated on the slide (Figure 6).

(1) The center of gravity of the trunk, as

represented by a vertical line through the center of the 3rd lumbar vertebra, may pass far anterior to the sacrum. Normally the front of the sacrum should be within 1/4 inch of this line⁶. If more than one inch, a large portion of weight is not supported by bone but by muscles and ligaments which are very liable to strain.

(2) The constant shearing force always present is proportional to the obliquity of the superior surface of the first sacral vertebra. If the plane of the articular surface of the first sacral is too far from the horizontal, shearing stresses are present which make the muscles and ligaments liable to strain. The average lumbosacral angle is 42°—if the angle is over 55° the stresses are severe⁶. Ferguson has calculated the relation of the lumbo-sacral angle to the forward component of the weight thrust as follows: At 40° about 40% of the weight thrust is forward, 50°—60%, 55°—75%, 80°—90%⁶.

Symptoms and Signs

The patient has a feeling of fatigue in the low back area which may lead to aching. On the other hand, there may be acute pain in intermittent attacks, increasing in frequency and in duration of the individual attacks. About one-half the cases report a history of injury associated with onset of pain. The pain is affected by motion, exertion, or position—it is relieved by rest. It may be associated with a particular motion, may be local in the lumbo-sacral area or may radiate to the buttocks, hips, thighs, calves, sciatic nerve or coccyx.

There may be paresthesias such as numbness, tingling, or sensation of heat or cold in the areas of radiation. The radiations may be unilateral or bilateral to either side regardless of the type or side on which the anomaly is located.

There may be spasm in the lumbo-sacral area, the spine being held stiff with motion limited. Tenderness may be present over the lumbo-sacral or sacrum iliac areas. Frequently, there is pain on passive motion or rotation, flexion, extension or side bending of the lumbar spine and on flexion of the hip with the knee extended.

Most individuals have their first symptoms

between the ages of 25 and 35 and these most often present themselves at the clinic in the early thirties.

Diagnosis

Diagnosis rests on the following:

(1) X-ray demonstration of an anomaly capable of causing symptoms.

(2) Pain or fatigue aggravated by exertion, especially some particular motion, and relieved by rest.

(3) Ruling out other causes G. Y. N., G. I., G. U. or skeletal disease or injury. The vast majority of cases of low back pain and sciatica are due to orthopedic conditions.

Differential Diagnosis

Sacro-iliac strain is rare. The sacro-iliac joints allow but a few degrees of rotary and sliding motion and have the strongest ligamentous support of any joints in the body. It is hard to conceive of low back pain being the result of ligamentous strains or minute subluxations at this joint. Such a conception is especially difficult to carry when we see T. B., chronic arthritis, and gross subluxations of a sacro-iliac joint following severe injuries unassociated with much pain. The reason the conception of the etiology of the low back pain and sciatica is due to sacro-iliac subluxation and that it has held sway since 1905, when brought out by Goldthwait and Osgood⁹, is that the non-operative treatment is of equal value for lumbo-sacral strain. The various diagnostic tests aimed at eliciting symptoms in sacro-iliac sprain are almost as effective in producing symptoms in lumbo-sacral sprain. Thus, the misconception has been long lived.

In the operative fusion of the sacro-iliac joints, the posterior attachments of the gluteus maximus and deep fascia are widely stripped from the iliac crest and this gives relief from pain. Thus, Heyman observed the sacro-iliac fusion to cure patients immediately¹⁰. This was too quick for operation on the sacro-iliac joint to be effective. Now he has found that simple posterior stripping of the structures about the iliac crest will sometimes give a complete cure of sciatica. Bed rest, immobilization and other measures which are used in treating so-called

sacro-iliac sprain have proved beneficial in treating lumbo-sacral sprains. Hence, the fallacy of sacro-iliac strain has not been exposed as quickly as it might have been.

Pressure on the Nerve Root

Ruptured intervertebral disc may give the same syndrome. It is a very interesting subject. I would like to talk at length on it but it is deserving of a paper in itself. It occurs in two to three per cent of back and sciatic cases². In any case of persistent sciatica it should be ruled out. I would like to sound a warning note about lipiodol injection in the spinal canal. I have seen four cases of radiculitis following lipiodol injection for diagnosis purposes and will never forget them. I think lipiodol should only be used just before operation and at the operation should be washed out of the spinal canal. In other words, I think you should be able to diagnose the lesion without lipiodol but, if lipiodol is used, it should be removed the same day.

Primary myofascitis, arthritis, fractures and tumors or other orthopedic conditions to be ruled out.

Prophylaxis

After a clear conception of compensation and decompensation of the supporting structures just outlined, the prophylaxis is logical, i. e., to build up muscle tone and power to meet the stresses that the bony mechanism is inadequate to meet. The stresses or erect posture in the majority of patients is not surprising as our spines are developed for the horizontal posture and have not yet become well adapted to the vertical. The means of building up muscle tone and power is simple but the patient is not apt to spend the time or trouble to accomplish it. Therefore, the patient rocks along and has a series of decompensations unless relieved by surgery. It would be well worth while for the industrialist to make X-ray studies of the lumbo-sacral areas of applicants for heavy labor and rule out those which are almost sure to develop symptoms referable to the back. Eight cases of spondylolisthesis were found in the examina-

tion of 150 applicants for employment by the Champlain Refining Company.

Treatment

Treatment—Non-Operative.

(A) Mild Cases.

(1) Exercises to improve body posture and strengthen the lumbar and abdominal muscles are of benefit.

(2) Foot posture should be improved, sensible shoes with low heels worn, equalization of leg length accomplished if indicated.

(3) Heat and massage.

(4) Hard bed, i. e., a solid board between spring and mattress.

(5) Eliminate foci of infection.

(6) Rest.

(7) Vitamin B therapy.

(B) Cases of Moderate Severity.

In addition to above, a brace or belt may give considerable relief.

(C) Severe cases.

(1) Bed rest on a hard board.

(2) Heat and massage certainly makes you feel better and is worth while.

(3) Sarapin injections are worth a try. Sarapin has no action on motor nerves. It may be injected into the painful points or a paravertebral injection of the 5th lumbar or other nerve root may be done. The relief is usually not lasting. Novocain may be used as described above.

(4) Manipulations—forceful manipulations often cause harm and are not warranted. Gentle manipulations may be done routinely. Often there is some temporary relief.

Operative Treatment

Tensor fascia fasciotomy, when the tensor fascia lata is contracted, gives from slight to marked relief in a fair number of cases and is often worth a try for it is a simple procedure. Do not expect relief in over half of the cases.

The Heyman operation (stripping of the structures from the iliac crest) releases fascial tension and offers relief in a slightly greater percentage of cases than the simple tensor fascia fasciotomy. Just how these procedures often break the cycle of pain and give relief in sciatica and low back pain is worth a discussion in itself.

Spinal Fusion

Fusion of the lumbo-sacral spine is the treatment of choice when the attacks of back and sciatic pain occur so frequently and severely that it is worth the patient's time to spend six weeks in bed after the fusion.

Spinal fusion is done on the theory, now proven in hundreds of cases, that complete elimination of motion will cause cessation of inflammation existing in and around the articulations and intervertebral foraminae and relieve supporting muscles and ligaments of the strain they have been unable to bear.

The first spinal fusion was done by Hibbs at the New York Orthopedic Dispensary and Hospital in 1914. By 1936 the operation had been done on 681 patients with only three deaths—a mortality of .4%.

The patients are recumbent six weeks and wear a light spinal brace. We are experimenting with methods of internal fixation so that the patients may be allowed up sooner. I believe, if a careful spinal fusion is done and a large quantity of small chips of cancellous bone is used, the patient could be allowed up soon after the operation with the same percentage of success.

In the Hibbs type of fusion the tissues are slowly and meticulously stripped subperiosteally from the spines of the 4th and 5th lumbar vertebra and sacrum. These spines are then removed and prepared as small bone chips by an assistant. The lumbo-sacral joint articulations are exposed and the cartilage removed by a curved osteotome and curette. A chip or chips of soft cancellous bone are packed into the joint spaces. The remaining spine and laminae of L-5 are fish scaled by a gouge. This makes curved chips which are interlaced over similar chips turned up from the sacrum. Extra bone is obtained from the sacrum, if it is thick, or from the iliac spines, or from the upper tibia and prepared as small bone chips. Soft cancellous bone is greatly superior to hard cortical bone in effecting a rapid and firm fusion. Small chips are better than large because there is less motion between the chips and they are incorporated into the fusion as living bone faster.

Results of Spinal Fusion

The percentage of cures, meaning patient relieved of pain and resumed original occupation, is over 80%. Better selection of cases should improve this percentage.

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Conjunctival Plastic Operation In Cases of Hypotonia from Filtering Operations or Ocular Fistulae

J. B. WORKMAN, JR., M. D.
COLUMBIA, SOUTH CAROLINA

Among the discouraging features with filtering operations in glaucoma surgery is the fact that the intra-ocular tension may be diminished below normal. This is an undesirable feature as it invites such complications as cataract, and retinal detachment. The "bleb" resulting from the Elliot trephining and occasionally the iridencleisis is not infrequently extremely thin and intra-ocular infection may occur. It is at times so thin that it ruptures and aqueous humor constantly drains through the resulting fistula. Leaking wounds or a cystoid cicatrix may also follow cataract extraction and penetrating wounds near the limbus. They may also result from disease processes, namely, spontaneous perforation of an ulcer. The presence of such a wound is easily diagnosed from the resulting low tension and by placing a drop of 2% fluorescein in the eye. The aqueous will discolor and wash away the fluorescein at the wound site.

While doing an Elliot trephining the surgeon may button-hole the conjunctival flap near the limbus. This is a bad complication and becomes graver if the eye has previously been operated; when operative space becomes precious.

Such complications mentioned above are serious and may easily mean the loss of the eye. A definite and successful way of managing such cases is available and has been very helpful on several occasions to the author.

The method was introduced by Dr. John Wheeler* and consists of removing a crescent of epithelium from the adjacent cornea. This is best done with a small sharp curette or the point of a cataract knife. The cornea should be well scarified and care must be taken not to exert too much pressure on the eye. The conjunctiva is raised by a subconjunctival injection of 2% procaine hydrochloride. It is then dissected from the limbus and undermined so as to slide easily. Black silk sutures are placed on either side near the limbus in the episcleral tissue and then through the conjunctiva on either side so as to draw it over the denuded area of the cornea. The conjunctiva will adhere firmly where the corneal epithelium has been removed, but not elsewhere, and the adhesion will remain permanently. The suture will pull out in five to seven days or it may be necessary to remove them. No chemical application is necessary on the denuded cornea to cause the conjunctiva to adhere. There may be a temporary rise of tension after the flap has been put in place. In nearly every case, however, there will be an adjustment to normal tension range. The operation is a satisfactory procedure in raising intra-ocular pressure, closing an ocular fistula or removing a cystoid cicatrix.

If it is thought advisable to remove some of the conjunctiva in the region of the bleb, care should be taken not to cut away too much as a ptosis may result. This conjunctiva should

possibly be saved for overlapping the denuded cornea. In the event a ptosis develops, tarsal resection or resection of the levator gives satisfactory correction for drooping of the lid.

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*Collected Papers of John M. Wheeler, M. D., on Ophthalmic Subjects.

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Office of Publication: (In care of the Editor) Florence, S. C.
Subscription Price \$3.00 per Year

SEPTEMBER, 1941

THE 1942 MEETING

At the meeting of the House of Delegates in Greenville an invitation was extended by the Columbia Medical Society to the State Medical Association to hold the 1942 annual session in Columbia, and this invitation was accepted.

It has become evident, however, that hotel facilities in Columbia, due to the activities of Fort Jackson and the General Assembly, might be such that it would be extremely difficult to make arrangements for the care of the four hundred odd physicians who would attend. In view of this the Pee Dee Medical Association, through its President, Dr. E. M. Dibble of Marion, extended an invitation to Council to hold the meeting at Myrtle Beach. This invitation was extended with the proviso that any change must be agreeable to the Columbia Medical Society. At a regular meeting the Columbia Medical Society discussed the matter and graciously relinquished their rights. The Council has officially announced that the 1942 annual meeting of the South Carolina Medical Association will be held at Myrtle Beach. Preliminary plans for the meeting have already been made and certain of the local committees have been appointed. Dr. E. M. Dibble of Marion, is General Chairman. Within a short while the names of the members of the Scientific Committee and the other committees will be printed in the Journal. The exact date of the meeting has not been established but it will probably be held during the first or second week of May.

MEDICAL ADVISORY BOARD

The United States Director of Civilian Defense has recently appointed the following Medical Advisory Board to assist the Medical Division of the Office of Civilian Defense:

Dr. George Baehr, New York, Chairman.
Dr. Robin C. Buerki, Madison, Wisconsin.
Dr. Elliott Cutler, Boston, Massachusetts.
Dr. Oliver Kiel, Wichita Falls, Texas.
Dr. Albert McCown, Washington, D. C.
Dr. Fred Rankin, Lexington, Kentucky.

It is the purpose of this Board to keep physicians informed of all medical and public health activities of this organization. Such information will be transmitted to the editor and will be printed in this Journal.

AMERICAN MEDICAL DIRECTORY

At no time is it more important than at the present for the American Medical Association to have all available information concerning physicians in this country.

In view of this the following statement should be read carefully by every physician.

About September 1, an information card will be sent from the headquarters office of the American Medical Association to every physician in the United States and Canada. The information secured is to be used in compiling the Seventeenth Edition of the AMERICAN MEDICAL DIRECTORY.

The directory is prepared at regular intervals in the Biographical Department of the American Medical Association. The last previous edition appeared in 1940. This volume is one of the most important contributions of the American Medical Association to the work of the medical profession in the United States; it has been especially valuable in the medical

preparedness program. In it, as in no other published directory, are dependable data concerning physicians, hospitals, medical organizations and activities. The directory provides full information concerning medical colleges, specialization in the field of medical practice, memberships in special medical societies, tabulations of medical journals and medical libraries and, indeed, practically every important fact concerning the medical profession in which any one might possibly be interested.

Before filling out the information card, read the

instructions carefully. Physicians are especially urged to state whether or not they are on extended active duty for the medical reserve corps of the United States Army and Navy. Fill out the card and return it promptly whether or not a change has occurred in any points on which information is requested. If a change of address occurs before March 1, 1942, report it at once. Should you fail to receive a card before the first of October, write at once to the headquarters office stating that fact and a duplicate card will be mailed.

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PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

THE TREATMENT FOR CONGENITAL SYPHILIS

D. L. Smith, Jr. M. D.

Spartanburg, S. C.

This brief outline is not written with the idea of contributing anything new but rather with the hope that it may give a definite treatment outlined for a case of congenital syphilis.

The course consists of the oral administration of Stovarsol (.25 grams per tablet—Merck & Co.)

- $\frac{1}{4}$ tablet once a day for one week.
- $\frac{1}{4}$ tablet twice a day for one week.
- $\frac{1}{4}$ tablet three times a day for one week.
- $\frac{1}{4}$ tablet four times a day for one week.
- $\frac{1}{2}$ tablet three times a day for one week.
- $\frac{1}{2}$ tablet four times a day for one week.
- 1 tablet twice a day for one week.

Fifty-six tablets (14 grams) in seven weeks followed by ten injections of bismuth subsalicylate in oil. The injections are given twice a week, deeply into the muscle, $\frac{1}{2}$ -1 cc for older children and half this amount to very small infants. Thus each complete course would require twelve weeks or three months if one week is passed when the Wasserman is taken.

A urine specimen of the patient should be examined each week as albumin has been noted at times, though it disappears when the drug is withheld for a short time.

A red blood count and hemoglobin determination should, when possible, be made at the end of each course. Certain rare cases of agranulocytosis with aplasia of the bone marrow have been noted but this is found to occur in the administration of any arsenical at times.

A physical examination is desirable at the end of each course. The symptoms of syphilis when present as a rule disappear with the end of the first week of treatment. In fact, the pain of the periostitis usually abates within the first day or so although some of the chronic

destructive changes do not disappear at once.

The advantages of the above procedure where oral treatment is principally administered and where the injections of the bismuth in oil are given intramuscularly are obvious to anyone who has spent time injecting a small vein intravenously.

The results obtained with the above method have proven as satisfactory as the neoarsphenamine injections. It can certainly be said that the cooperation of the parents is much better and they return for treatment more readily.

Toxic reactions and complications are not as frequent as with the injection method although they must be borne in mind. Loss of appetite, cutaneous reactions, vomiting and diarrhea have been reported but are comparatively infrequent and insignificant.

Discussion: It is, of course, recognized that the ideal time to treat congenital syphilis is before the birth of the baby by treating the mother. The majority of mothers who have an adequate three month's course of treatment will not have a luetic offspring. In case there is any doubt about whether the child is diseased at birth, it is recommended that one course as described above be given and that a serological test be made on the child at three months of age. A negative test at this time would mean almost certainly that the child would not ever have the disease, at least congenitally.

In children who have had the disease for a number of years, four courses as outlined above should be given during the first year of treatment; two courses during the second year of treatment and one course each year thereafter, if the serological tests continue to be positive.

There are many other drugs and many other methods of administration of the two drugs mentioned above. However, I feel that the treatment outlined is applicable to all children from prematures on up to the age when injections with the arsenicals become more practical and easily administered. For this reason, all debatable issues have been avoided.

HISTORICAL SIDELIGHTS

DR. JAMES MOULTRIE

(First President of South Carolina Medical Association)

Dr. James Moultrie, one of the founding delegates and later president of the American Medical Association, was born in Charleston, S. C. on March 27, 1793. His forebears had come to South Carolina directly from Scotland in the early part of the 18th century and more than one of them were physicians; his father, for whom he was named, was a scholarly physician of Charleston. Dr. Moultrie was educated in Charleston, S. C., and Hamher-smith, England; upon returning to America, he began the study of medicine with Drs. Barron and Wilson in Charleston, and was graduated from the University of Pennsylvania in 1812.

Dr. Moultrie began the practice of medicine in Charleston immediately after completing his course of study in Philadelphia, but upon the outbreak of the War of 1812 he offered his services and was appointed surgeon in charge of a hospital in Hampstead. On May 23, 1813, he was commissioned physician of the port of Charleston by General Joseph Alston.

The main energies of his life were spent as a teacher of physiology and in furthering the cause of medical education. As early as 1822 he was in correspondence with Dr. Thomas Cooper, president of the South Carolina College, with regard to the founding of a medical college in South Carolina; however, when the college was finally established in Charleston in 1824 he declined a chair, believing that the venture could not succeed as an appropriation from the state legislature had failed to be secured. When the college was reorganized in 1833 under a new charter and with a new faculty, Dr. Moultrie accepted the chair of physiology, a position he held until 1866.

Dr. Moultrie's interest as a teacher of phy-

siology extended over a period of many years. It is said that as a lecturer, he preferred to sacrifice beauty of diction to the claim of a minute and detailed presentation of his subject. However, a remark attributed to one of his students was that his impression of Dr. Moultrie's lectures was that he could "dive deeper, stay under longer and come up drier" than any lecturer he had ever heard. His publications were few: an article on the "Uses of the Lymph" was published in the first volume of the American Medical Journal, and an essay on the "State of Medical Education in South Carolina" was published in 1831 by the South Carolina Society for the Advancement of Learning.

Dr. Moultrie was one of the delegates chosen from the Medical Society of South Carolina who went to Philadelphia in 1847 to join in the organization of a national medical society. On account of his active work in this connection, he was made one of the vice-presidents of the American Medical Association, and in 1851, at the Charleston meeting, he was elected president. In commemoration of this meeting, the American Medical Association presented a chair to the local medical society which has been used ever since as the chair of the presiding officer of the Medical Society of South Carolina.

Robt. Wilson, Jr.

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THE TECHNIC OF INDIVIDUAL LIGATION IN PNEUMONECTOMY AND EXTRAMEDIASTINAL INDIVIDUAL LIGATION IN LOBECTOMY: AN ANALYSIS OF THE AUTHORS' SERIES, BY F. P. COLEMAN AND J. G. SEASTRUNK. COLUMBIA. SOUTH. SURG. 10:491, JULY, 1941.

A review of the development of these methods, a description of the methods, and a summary of 8 cases of pneumonectomy and 13 cases of lobectomy.

ANALYSIS OF SOME CASES OF GASTRO-INTESTINAL ALLERGY ASSOCIATED WITH ORGANIC DISEASE, BY G. HOLMES. GREENVILLE. SOUTH. MED. J. 34:643, JUNE, 1941.

Dr. Holmes points out the difficulties in detecting purely allergic manifestations and the importance of recognizing organic lesions which may coexist, and may be overlooked by the enthusiastic allergist (and what allergist is not enthusiastic!)

THE LATE RESULTS IN ACUTE PERFORATED PEPTIC ULCER BY SIMPLE SUTURE, BY E. F. PARKER. CHARLESTON. SURGERY. 10:49-63, JULY, 1941.

A summary of cases treated at Roper Hospital. Only 33% remained well. Secondary operation was necessary in 33%—Multiplicity of ulcers may be the cause of poor results.

ABDOMINAL ARTERIAL APOPLEXY, BY GEORGE H. BUNCH AND L. E. MADDEN. COLUMBIA. SOUTH. MED. J. 34:643, JUNE, 1941.

An elderly man with arteriosclerosis had abdominal crisis with shock, abdominal swelling, and intraperitoneal blood—The subject is reviewed.

ADHESION FROM HOT LAPAROTOMY PADS, BY F. E. KREDEL AND H. G. SMITHY. CHARLESTON. SURGERY. 10:45-48, JULY, 1941.

Hot dogs from hot pads, or why adhesions arise when excessive hot pads are used? Experimental evidence is obtained from 26 dogs.

Temperatures above 45° C are definitely harmful.

THE MANAGEMENT OF THE THIRD STAGE OF LABOR, BY J. D. GUESS. GREENVILLE. SOUTH. MED. J. 34:604, JUNE, 1941.

The mechanism of this stage is discussed—The proper use of pituitrin as an adjuvant at the beginning of the stage is emphasized.

FAMILIAL DARIER'S DISEASE (KERATOSIS FOLLICULARIS), BY J. M. HITCH, J. L. CALLAWAY AND V. MOSELEY. ORANGEBURG. SOUTH. MED. J. 34:578, JUNE, 1941.

Fourteen members of 6 generations of a family were affected with this rare disease. As in most rare skin diseases, treatment is uniformly unsatisfactory. Considering the relative innocuousness of the disease, the authors' suggestion that families so afflicted be sterilized seems a bit radical.

WEIL'S DISEASE. A COMPLETE REVIEW OF AMERICAN LITERATURE AND AN ABSTRACT OF THE WORLD LITERATURE. SEVEN CASE REPORTS, BY W. F. ASHE, H. R. PRATT-THOMAS AND C. W. KUMPE. CHARLESTON. MEDICINE. 20:145, MAY, 1941.

An acute epidemic disease caused by leptospira icterohemorrhagiae, carried by rats. It is susceptible to treatment with immune serum.

THE PYRAMIDAL TRACT OF THE MONKEY. A BETZ CELL AND PYRAMIDAL TRACT ENUMERATION, BY A. M. LASSEK. CHARLESTON. J. COMP. NEUROL. 74:193, APRIL, 1941.

Anatomical study of the cells which are thought to be responsible for the excitable properties of the motor cortex.

THE HUMAN PYRAMIDAL TRACT III. MAGNITUDE OF THE LARGE CELLS OF THE MOTOR AREA (AREA 4), BY A. M. LASSEK. CHARLESTON. ARCHIVES OF NEUROL. AND PSYCHIATRY. 45:964-972, JUNE, 1941.

An anatomical study.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

Case of Dr. W. H. Kelley

ABSTRACT NO. 437 (72059)

Student C. C. Smith (presenting):

History: A 43 year old negro man admitted on 11-9 in a semi-stuporous condition—with chief complaint of "weak and vomiting" since 11-7. Had had persistent bilateral frontal headache for same length of time. Appetite had been falling for 3 weeks and unable to eat anything at time of admission. Epigastric pain for a questionable period of time had no time or food relationship. Also stated that he had had night sweats since 11-7, but their severity not known. Diminution in urinary output for several weeks with voiding of small amounts at frequent intervals (5-7 X day and night).

Dyspnea for past year or two after taking a few fast steps. B. P. 165/110 in 1937. Clinic patient since 1938 with varicose veins and ulcers which would not heal. Saphenous vein ligation in 1938.

Physical: T—98 P—110 R—32 B. P. 280/180.

Revealed an ill, dysarthric, uncooperative, semi-comatose negro man. Left eye diverged laterally. Pupils small and equal and reacted to light. Ophthalmoscopic:—much structural damage to vessels of retina; hemorrhages, arterial obliteration and tortuosity. Ears, nose and pharynx normal. Tongue coated but otherwise normal. Pulsation of neck vessels, particularly marked in suprasternal notch. Chest moves freely with respiration and excursions equal. Lungs clear to percussion and auscultation. Pulse bounding and regular and synchronous with heart sounds. Heart markedly enlarged to left with PMI in 6th interspace in anterior axillary line. Soft blowing murmur at apex. A₂ loud and of metallic character. Peripheral vessels markedly sclerotic. Abdomen normal—scaphoid. Prostate not enlarged or nodular. Muscle torn greater on right. Reflexes diminished in right arm; left arm one plus; right leg three plus; left leg two plus; bilateral Babinski; neg. Hoffman; abdominals and cremasterics present. Necrotic desquamating skin and ulcers over lower extremities.

Laboratory:

Urinalysis 11-10

Sp. Gr. 1.012

React. Acid

Alb. 3 plus

Sugar 0

Acetone 0

Pus 4 PHF

Blood 15 PHF

Casts 1 plus

Epith 3 plus

Blood 11-9

RBC 3.60—1.90 11-27

WBC 8650—17,800 11-27

Pmn 77%

Hb 8 gms.

Wass. and Kline neg.

Spinal fluid 11-10 300 mm. Pressure.

Urea N Creatinin

11-9 52 gm. 2.4 mg.

11-14 200 8.3

11-16 104.3 5.8

11-25 108 5.7

Course: Temperature around 102 degrees for first few days, practically normal for remainder of course. Was in stupor until 11-14 when he showed marked improvement and was able to talk, although speech slurred. Relapsed to former state on following day. Uncooperative and incontinent. Extension of large bed-sore on rt. buttock. On 11-25 and 26 patient passed bright red blood from rectum, estimated at 100 cc. on 11-25. Pt. remained essentially the same and expired on 12-2.

Dr. Kelley (conducting): Mr. MacLauchlin, do you think this man had one disease or several pathological conditions?

Student MacLauchlin: I think he primarily had one disease, namely arteriosclerosis. This one disease affected various regions and systems of his body, however, so that he really had a disease complex which is commonly called hypertensive cardio-vascular renal disease.

Dr. Kelley: Do you think he had any particularly form of this disease?

Student MacLauchlin: I believe that the disease was relatively benign for a considerable period of time, but that during the time he was in the hospital the disease became malignant. This is indicated by the rapid course of the patient's illness. He became stuporous and then comatose with rapidly progressive symptoms and an extremely high blood pressure. He had evidence of cerebral damage which was not confined to one particularly locus, but consisted of diffuse scattered areas of damage due to ischemia and the resultant anoxemia. Don't believe there was actual organic damage and believe that this type of cerebral involvement goes more with the malignant type of hypertension, constituting the so-called hypertensive encephalopathy. The eye-grounds and the urinary findings also point to the malignant nature of the disease, as does the development of the uremia.

Dr. Kelley: What would you predict as to the

pathological changes that the kidneys would be likely to show?

Student MacLauchlin: I think they would be flea-bitten in appearance and of about normal size, as fibrosis probably had not had the time to produce contracture and shrinkage. Microscopically I wouldn't expect the glomeruli to show much damage, but the arterioles should show hyalinization and actual necrosis.

Dr. Kelley: How do you account for the vomiting?

Student MacLauchlin: The hypertensive encephalopathy could be responsible for this.

Dr. Kelley: What about the epigastric pain?

Student MacLauchlin: I am afraid that I don't have enough data here to hazard an explanation that I would be proud of.

Dr. Kelley: Mr. Steinberg, do you have anything to add that might aid in the explanation of any other aspects of the symptomatology?

Student Steinberg: I think that the diminution of the urinary output is consistent with renal failure. The infected decubiti scattered over the body would account for the temperature elevation. The slurred speech probably reflects the effect of a cerebral lesion and I think it is possible that this man had a real organic lesion of the brain. It is not uncommon to have a uremic colitis in the terminal stages of this condition which would account for the passage of blood per rectum. There is ulceration of the intestinal mucosa with erosion of small blood vessels.

Dr. Robert Wilson: I would like a student to give his ideas as regards the pathology of hypertensive encephalopathy.

Student Steinberg: I had the impression that it consisted of edema of the brain with increased intracranial pressure. Vasoconstriction is supposed to occur with local areas of ischemia.

Dr. Kelley: Do any other members of the faculty have any comments to make or questions to ask?

Dr. Townsend: Wagener has made a study of the prognostic signs in the retina over a five year period. Arteriosclerosis in itself may not be indicative of early death of the patient, the average length of life in his series which presented arterios-

clerotic changes along being 13.9 months. When angiospasm are associated along with the arteriosclerosis, however, the prognosis is much more grave and the average life expectancy is reduced to 5.4 months.

Dr. Lynch: There were no gross lesions of any note, but this is one of the most remarkable cases of malignant hypertension that we have seen. All the arterioles showed profound sclerosis with spots of necrosis in their walls. The blood vessels everywhere in the body were affected, the disease showing a difference in degree but not in order. The pancreas was markedly scarred and fibrosed with spots of more recent necrosis, apparently from steady progressive closure of the vessels. It was not of such a degree as to be productive of a definite clinical picture, but I believe that the epigastric pain may have been related to this. The patient did not have an encephalopathy. He had cerebral edema, as a result of multiple thromboses with resultant cerebral injury and a resultant encephalitis. There were definite organic changes present.

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NEWS ITEMS

The following Reserve Officers have been ordered to active duty:

Captain I. S. Barksdale, Greenville to Fort Bragg, N. C.

First Lieut. R. K. Brown, Greenville to Camp Davis, N. C.

First Lieut. I. C. Evans, Charleston, to Camp Claiborne, La.

First Lieut. J. M. Hanks, Anderson, to Fort Bragg, N. C.

First Lieut. W. H. Lacey, Georgetown, to Camp Dixon, N. C.

First Lieut. C. S. McCall, Bennettsville, to Fort Benning, Ga.

Capt. S. E. Miller, State Park, to Shelby, Miss.

First Lieut. B. M. Oliver, State Park, to Fort McClellan, Ala.

First Lieut. F. P. Owens, Union, to Camp Shelby, Miss.

First Lieut. W. J. Robinson, St. Matthews, to Fort Bragg, N. C.

First Lieut. J. D. Turner, Winnsboro, to Fort Jackson, S. C.

Dr. John M. Fleming of Spartanburg has passed the examinations of the American Board of Gynecology and Obstetrics and is now a Diplomate of that Board.

Dr. T. B. Reeves of Greenville and Miss Julia Smyth of Hendersonville, North Carolina, were married on July 22nd.

Dr. J. I. Converse, a recent resident of the Greenville General Hospital, and Dr. J. W. Bell, a recent interne, have located in Greenville.

Dr. A. E. Willis, Roentgenologist, Tri-County Hospital, Orangeburg, has recently returned from a trip to Washington, New York, and Quebec.

Dr. V. M. Rhinehart has opened an office for the general practice of medicine at Newberry. Dr. Rhinehart was graduated from the Medical College of South Carolina in 1941, and his home was Walhalla.

Dr. Frank P. Gaston of Rock Hill was re-

cently married to Miss Dora Jones Dunlap of that city.

Dr. Malcolm Mosteller has opened an office in Columbia for practice of Radiology.

Captain G. C. Brown who has been in the Army since December recently spent a week with his family in Walterboro.

Dr. E. M. Rice, Director of the Health and Sanitation Division of the South Carolina Public Service (Santee-Cooper) has gone to Washington for service in the Army. Dr. Rice, who has been granted leave of absence by the authority, will hold the rank of major and director of an army school at the capital.

District Three of the S. C. Nurse's Association adopted eight hour duty periods for the private duty nurses in that area. The new plan, effective September 1st, will be on trial for one year. For regular duty the nurses will receive \$5.00 for their eight hours of work. Alcoholic, contagious and nervous disease cases, will be charged \$6.00 per eight hour period.

The Physicians Casualty Association of America has advertised with this Journal for many years and we are glad to call attention to the following statement.

"The Physicians Casualty Association of America has made a reduction in the \$25.00 per week accident and health insurance, of \$1.00 per year; in the \$50.00 per week accident and health insurance, of \$2.00 per year and in the \$75.00 per week accident and health insurance, of \$3.00 per year."

The American Neisserian Medical Society announces an annual prize of one hundred dollars, to be known as the P. S. Pelouze Award, to be presented to the person under thirty-five years of age who, in the opinion of the Committee of Awards, has made the outstanding contribution to the control of the gonococcal infections during the preceding year.

Nominations for the award should be sent to the Secretary not later than March 31 of each year. The winner will be announced at the subsequent annual meeting of the Society.

There is an article by Dr. Miles Atkinson of New York in the August issue of *The Atlantic Monthly* which should be read by every physician who comes in contact with a hospital. It is entitled "The Patient Comes First."

The Pediatric Seminar this summer at Saluda, N. C., was highly successful in every way.

The following men from South Carolina were members of the faculty:

Drs. D. L. Smith of Spartanburg, Francis B. Johnson of Charleston, William Weston of Columbia, R. M. Pollitzer of Greenville, Kenneth M. Lynch of Charleston, J. Warren White of Greenville, M. W. Beach of Charleston, D. L. Smith, Jr. of Spartanburg, and Julian P. Price of Florence.

Among the general practitioners who attended the Seminar were the following from South Carolina:

Baldwin, W. E., Walhalla, S. C.
Bare, Goodman, Anderson, S. C.
Barnes, L. Paul, Bennettsville, S. C.
Blake, Herbert, Anderson, S. C.
Crawley, W. G., Lancaster, S. C.
Dendy, W. S., Pelzer, S. C.
Edwards, Preston, Conway, S. C.
Fishburne, W. K., Moncks Corner, S. C.
(1 wk.)

Fort, James A., North, S. C.
Frey, G. B., Johnsonville, S. C.
Garvin, O. D., Spartanburg, S. C.
Gilmore, H. S., Nichols, S. C.
Griggs, D. C., Pageland, S. C.
Hall, J. C., Gaffney, S. C.
Hames, H. T., Jonesville, S. C.
Henslee, S. C., Dillon, S. C.
Holtzclaw, J. N., Greenville, S. C., (1 wk.)
Johnston, B. R., Estill, S. C.
McCurry, W. E., Ridge Spring, S. C.
McGill, W. K., Clover, S. C.
Mason, R. E., St. Stephens, S. C.
Moore, E. H., Newberry, S. C.
Nimmons, L. A., Bishopville, S. C.
Palmer, J. S., Allendale, S. C.
Parker, H. M., Wedgefield, S. C. (1 wk.)
Perry, William L., Chesterfield, S. C.
Porter, John H., Andrews, S. C.
Price, William H., Charleston, S. C.
Senn, H. B., Newberry, S. C. (9 days).
Simmons, John F., Greenville, S. C.
Simpson, F. T., Westminster, S. C.
Tate, J. V., Calhoun Falls, S. C.
Teague, Martin M., Laurens, S. C.
Timmerman, R. H., Batesburg, S. C.
Ulmer, J. G., Hemingway, S. C.
Westrope, G. R., Gaffney, S. C.
Whitley, W. E., Andrews, S. C.
Sease, Claude, Clover, S. C.
McGill, W. K., Clover, S. C.
Mrs. Dell Rogers Harper, R. N., S. C.

DOCTOR'S CAR RANKS AS NEEDED EQUIPMENT

In a profession that is no respecter of time-tables, the physician's car is just about as much a part of his professional equipment as his stethoscope or thermometer.

Because the hurry call to a patient's home may come at noon, midnight or dawn, the doctor must keep his medical kit ready and his car on hand twenty-four hours a day.

As a result, the medical man leads all occupational groups in the number of round trips rolled up annually.

Residents of rural areas, who had been far from a doctor's service in the horse-and-buggy days, are especially aided.

Out of every 100 doctors who use their private automobiles for necessity transportation, it was found that:

Sixteen average more than 1,500 trips annually. Fifteen make from 1,000 to 1,500 trips per year. Ten reported from 800 to 1,000 round trips by car per year. Twenty-eight range from 400 to 800 trips annually. Twenty-two average from 200 to 400. Only nine average fewer than 200 round trips a year for necessity driving.

For all car-owning physicians, the average number of round trips annually per car was found to be 947, of which 842 trips or nearly 90 per cent of the total were credited to necessity purposes.

Of all groups of car users, the doctors' cars rank next to the top, their average distance travelled in a year being 12,932 miles per car. And according to surveys, necessity driving accounted for 8,640 miles of the total.

By comparison, travelling salesmen who lead the occupational list of car users, have an average annual mileage of 18,791 miles, though their number of round-trips are less.—from "*Automobile Facts*."

SOCIETY REPORTS

Over sixty physicians attended the meeting of the Second District Medical Society in Batesburg on July 31st. The guest speaker was Dr. F. B. Carter, Professor of Obstetrics of Duke University and his subject was **Obstetrical Problems**. Dr. W. A. Hart of Columbia presented two case reports. Dr. George Bunch of Columbia spoke on **Shot Gun Wounds of the Abdomen** and Dr. R. E. Seibels of Columbia showed a moving picture of **Extra-Peritoneal Caesarean Section**. Officers elected for the coming year were Dr. E. W. Tucker of Johnston, President, Dr. W. A. Hart of Columbia, Vice President and Dr. William Weston, Jr., of Columbia, Secretary. Dr. George Truluck of Orangeburg, President of the S. C. Medical Association and Dr. J. P. Price, Secretary, were present and spoke briefly. Dr. T. A. Pitts of Columbia, President-elect of the State Association, was also present.

The Edisto Medical Society met on July 30, 1941, at Hotel Eutaw in Orangeburg. The guest speaker, Dr. J. K. Fairey of St. Matthews gave an interesting paper on **Fifty Years of Practice of Medicine**. Several of the members discussed some unusual cases which have come up in their practice during the past few months.

The August meeting of the Colleton Medical Society was devoted primarily to a discussion of medical ethics and means of improving medical service to the public.

The Greenville County Medical Society at its August meeting had Dr. Horton Casparis of Vanderbilt University as its guest speaker. The topic of his speech was **Behavior**.

The August meeting of the Columbia Medical Society was held at the S. C. State Hospital and papers were presented by members of the staff.

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Literature furnished on request

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BOOK REVIEWS

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD

William E. Ladd and Robert Gross
W. B. Saunders Company, Philadelphia

This book deals entirely with that branch of children's surgery devoted to the abdomen. The congenital anomalies and the acquired diseases of early infancy and childhood are thoroughly reviewed.

The authors have written a constructive book, the facts gathered from their personal experiences over the past twenty-five years. Most interestingly entered into and discussed are the pre-operative preparation, the operative period, the surgical technique, and the post-operative care.

It is my opinion that this is a clearly outlined discussion of a subject which needs more consideration. The book is attractively finished, is well indexed, and should prove a welcome addition to the library of any physician who deals with surgical abdominal conditions in children.

C. A. K.

INFANTILE PARALYSIS

Philip Lewin, M. D.
Associate Professor of Bone and Joint Surgery,
Northwestern University Medical School
W. B. Saunders Company

As every golfer knows it is one thing to plan and another thing to execute.

The plan of this book as outlined in the preface, is excellent. "I have endeavored," says the author, "to get my message across particularly to the family doctor, who usually sees these patients first." As one delves into the book itself, however, one finds a volume which will appeal to a limited number of

family physicians but which will serve as a good reference book for medical students and for those who deal with infantile paralysis on a relatively major scale.

With as many diseases as there are to be diagnosed and treated and with as much new material and information as is being sent forth from printing presses today the average physician, desirous though he may be of reading all that is worth while, must of necessity limit his reading to relatively short and comprehensive summaries or reviews. Had the author of this volume taken the material found in the first half of the volume and condensed it into one-half of its present space he would have prepared a work which would have been highly acceptable to the practicing physician. The last half of the volume deals with the orthopedic and operative care of these patients and as such holds little interest for the man in general practice.

During recent years there has been a growing tendency, and rightly so, for general practitioners and pediatricians to refer the victims of infantile paralysis to the orthopedic surgeon or to trained physiotherapists for proper convalescent care. The practicing physician should know that an arthrodesis is of distinct value in certain cases but he is not primarily concerned with the technique of the operation nor of the names of the different types of operations. These are matters for the orthopedic surgeon to decide and yet the latter half of this volume is filled with a description of operative procedures.

This book, well illustrated and well written, should be of distinct value to the orthopedic surgeon and to any pediatrician or practicing physician who is closely associated with an orthopedic hospital or crippled children's home.

HOUSE OF DELEGATES

(April 15, 1941, Greenville, S. C.)

(Continued from August issue)

DR. W. W. FENNELL, JR., ROCK HILL:

I wish to nominate a man who has been President of his local society, secretary of his local society, and chief of staff of the local hospital. That man is Dr. W. F. Strait, of Rock Hill, whom I now place in nomination.

A MEMBER: I wish to second the nomination. I have known Dr. Strait for many years, and I

know that he will make a good officer.

... A motion was offered that the nominations be closed and that the Secretary cast the ballot of the Association for Dr. Strait as Vice-President. Motion seconded and carried.

THE PRESIDENT:

The next office to be filled is that of delegate to the American Medical Association, to succeed Dr. Hines. Nominations are now in order.

... Dr. Douglas Jennings, of Bennettsville, nominated Dr. Thomas A. Pitts as delegate to the Ameri-

can Medical Association, to succeed the late Dr. Hines. Nomination seconded by Dr. William Weston, Columbia. Dr. Weston then moved that the nominations be closed and that the Secretary cast the ballot of the Association for Dr. Pitts. Motion carried.

PRESIDENT PRESSLY:

Nominations to the office of secretary-treasurer will now be received.

DR. DOUGLAS JENNINGS, BENNETTSVILLE:

Mr. President and members of the House of Delegates, the position of secretary-treasurer, the duties of which Dr. Hines performed so excellently, is going to be hard to fill. I wish to place in nomination the name of a young man who, I feel and others who know him feel, will in time make just as good and faithful a secretary-treasurer as Dr. Hines made us for so many years. I wish to nominate Dr. Julian P. Price, of Florence, for secretary-treasurer.

. . . This nomination was seconded by Dr. D. LeSesne Smith, of Spartanburg, and others. On motion by Dr. William Weston the nominations were closed and the President cast the unanimous ballot of the House of Delegates for Dr. Price as secretary-treasurer.

THE PRESIDENT:

I wish to say that during his term of office Dr. Price has served the Association well, and it is a pleasure for me to cast the vote of the Association for him.

Speech, Julian.

. . . Dr. Price thanked the members of the House of Delegates for their confidence in him and asked for their suggestions and criticisms, promising his best efforts for the advancement of the Association.

. . . The following were elected as members of the Board of Councilors:

First District, Dr. F. G. Cain, Charleston (re-elected).

Second District, Dr. R. B. Durham, Columbia (for one year, to fill the unexpired term of Dr. Thomas A. Pitts, President-Elect.)

Third District, Dr. J. Claude Sease, of Little Mountain.

Fifth District, Dr. Roderick MacDonald, Rock Hill (re-elected).

Sixth District, Dr. James McLeod, Florence (for one year, to fill out the unexpired term of Dr. Julian P. Price, elected as Secretary-Treasurer).)

Seventh District, Dr. E. T. Kelley, Kingstree (re-elected).

The following members of the Board of Medical Examiners, whose terms had expired, were re-elected: Dr. G. C. Brown, Jr., Walterboro, for the First Congressional District, and Dr. C. H. Blake, Greenwood, for the Third Congressional District.

New Business

The President called for the report of the Reference Committee. Dr. R. C. Bruce, its Chairman, reported that his committee had received only one recommendation, that being a resolution from the Committee on Medical Economics, as follows:

"RESOLVED, that the House of Delegates request the dean and faculty of the Medical College of the State of South Carolina to consider seriously the inclusion of and to incorporate, if possible, a course in medical economics and ethics in the training of medical students."

Dr. Bruce further reported that the Reference Committee recommended the adoption of the said resolution. On motion, the Reference Committee's report was adopted.

Dr. J. D. Guess, of Greenville, offered the following resolution, stating that it was proposed by and introduced at the request of the Greenville County Medical Society:

"Believing that a bill which has been introduced into the state legislature will, if passed, eliminate the faculty ruling of the Medical College of the State of South Carolina providing that a freshman with an extremely low record be not allowed to repeat the freshman year, a ruling that does not apply to members of other classes;

"And believing further that statements in the public press in which it was purported that Dean Robert Wilson was referred to as 'a czar when it comes to medicine' and 'a polished gentleman with the heart of a dictator' are untrue as to fact; therefore,

"BE IT RESOLVED, that the South Carolina Medical Association deplores such accusation directed against Dean Robert Wilson; and

"BE IT RESOLVED, FURTHER, that the Association is opposed to the passage of the said bill, believing it to be an unwarranted interference with the internal scholastic operation of the College; and

"BE IT RESOLVED, FURTHER, that the South Carolina Medical Association direct its Committee on Public Policy and Legislation to use every reasonable effort to bring about the defeat of this bill."

After some discussion, the resolution was adopted; and, on motion of Dr. Douglas Jennings, the Secretary was directed to send a copy thereof to the Judiciary Committee of the House, the Finance Committee of the Senate, and to both the Senate and House Committee on Medical Affairs.

Dr. James J. Ravenel, Charleston, offered the following motion: Resolved, that the House of Delegates refer to the Council the question whether or not to divorce the office of editor from that of secretary-treasurer. After considerable discussion, Dr. E. M. Dibble moved to table Dr. Ravenel's motion; and the motion to table was adopted by a standing vote of 28 to 20.

On motion of Dr. J. R. DesPortes, the name of the Committee on Necrology was changed to Memorial Committee.

Dr. N. B. Heyward, of Columbia, on behalf of the Columbia Medical Society extended an invitation to the Association to hold its 1942 meeting in Columbia, and this invitation was accepted.

At this time President Pressly asked Dr. William Weston to introduce Dr. Frank H. Lahey, the President-Elect of the American Medical Association, and Dr. Weston spoke as follows:

"Mr. President and gentlemen, I think of all the occasions of my attendance on the meetings of the House of Delegates of the American Medical Association the most solemn was that session of the House last year when the President of the United States asked us to meet in executive session to consider certain matters referred to us by the Government. I violate no confidence when I say that every recommendation made by the President was agreed to by the House of Delegates. But there was one

further step that had to be taken, and that was to decide upon the man who, as president-elect of that Association, could carry into effect the will of the House of Delegates as requested by the President of the United States. After the most serious consideration, in which there was warm but friendly debate, it was decided to select Frank Lahey, of Boston, Massachusetts, to carry out the will of the executive department of the United States Government. I therefore, sir, take great pleasure in introducing to you Dr. Frank H. Lahey, of Boston, President-Elect of the American Medical Association."

Dr. Lahey, after a few introductory remarks, read a prepared paper, (printed in May, 1941, issue of this Journal).

President Pressly, on behalf of the House of Delegates, thanked Dr. Lahey for his contribution to its program.

No further business appearing, the House of Delegates then adjourned *sine die*.



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The Student Loan Fund of the Woman's Auxiliary to the South Carolina Medical Association was started at the Annual Convention Meeting held in the parlors of the First Baptist Church of Greenville, S. C. in April, 1931.

Realizing that an objective was essential for the good of the auxiliary, Mrs. L. O. Mauldin, the president, recommended the Student Loan Fund as a solution. The recommendation was adopted and the auxiliary to Greenville County Medical Society gave \$25.00 in honor of the president. York County also gave \$5.00 at the same time. This was the beginning of the Student Loan Fund which today is a "sure enough" Loan Fund.

The purpose of the Loan Fund is to give aid to deserving sons and daughters of doctors who are or have been members of the South Carolina Medical Association.

Mrs. William A. Boyd of Columbia, S. C. was elected the first chairman and served four years with Mrs. L. O. Mauldin, co-chairman. Mrs. J. W. Bell, Walhalla, S. C. was treasurer. Mrs. Boyd did a splendid work organizing and creating interest in the Loan Fund. In 1935 Mrs. L. O. Mauldin was elected chairman with Mrs. C. P. Corn, co-chairman and Mrs. J. W. White, treasurer. This committee served four years.

The present committee, elected in 1939, is composed of Mrs. L. O. Mauldin, chairman, Mrs. T. A. Pitts, Columbia, S. C., co-chairman, and Mrs. J. L. Bundy, Rock Hill, S. C., as treasurer.

The Loan Fund is ten years old and in this time five scholarships have been awarded. The first loan was used only one year as the student had to give up the study of medicine be-

cause of financial reverses. His debt has been paid in full.

Three students on scholarships graduated in June, 1940 with splendid records from South Carolina Medical College of Charleston. They are serving as interns in three different hospitals. Two students are at the Medical College now, both are seniors.

Applications for the scholarship for another year was considered by the committee April 15th at the Poinsett Hotel, and Mr. William Marett was awarded scholarship 1941-1942.

The Auxiliary members have been so faithful and generous and we are sure they will continue to be because it is a work that any group should be proud to do; that of helping "the sons and daughters of doctors" to help themselves. The joy of this work is the knowledge that you are able to give help and see the results.

We feel there have been real accomplishments. The auxiliaries co-operate in every possible way, showing the splendid material we have in the State to carry on the work of the Student Loan Fund.

Six of the rules governing the Student Loan Fund are:

1. That the Student Loan Fund be used for students attending South Carolina Medical College as long as it is a grade "A" school.
2. That applicants Junior and Senior year of college be fully investigated as to scholarship, and his scholarship be of high standing—at least "C" grades.
3. Only resident sons and daughters of physicians who are or have been members of South Carolina Medical Association are eligible for benefit of this fund.
4. A detailed application on a form supplied by the Student Loan Fund Committee is required of all who desire loans. Such application must be accompanied by two letters of recommendation as to character and integrity, by records of preparatory work, and by a

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THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

October, 1941

NUMBER 10

A Study of Hookworm in South Carolina

JAMES C. BRABHAM, M.D.
UNION, S. C.

Across the lower coastal plain of sandy loam and swamp, stretches Colleton County, an area made up largely of small farms, occasional turpentine stills, and hunting reserves. Routine examinations of school children in this area showed a high percentage of anemia and listlessness. In 1939 and 1940, a hookworm survey of 625 grammar school children was made. Specimen containers were distributed and collected by the Health Department. Examinations were made by the Brine Floatation method in the local laboratory. Of all rural school children examined 62.5% were found to harbor hookworm. In some rural schools 100% of the children were found positive. In the Walterboro City Grammar School only 17.4% were found positive. Upon investigation of these cases it was found that almost all of the children lived in the rural area surrounding the town and were outside the area serviced by the city sewerage system.

For a rural population of 26,000 people, there is approximately 3,000 sanitary pit privies. Many of the homes have the old open back privy, while some few still resort to a clump of myrtle bushes. In one family of the last group, the father, mother, and four children were heavily infected. A child had died in this home the year before with the diagnosis of hookworm disease.

The scholastic records of the negative and positive groups of children were examined. Failures in school work were 4.1 times higher in the infected group than in the negative group.

Preparation of "Antigen" in Diagnosis of Hookworm Disease

PURPOSE: The usual examination of a large number of persons for hookworm is attended with several difficulties. In schools there is some difficulty in getting children to follow directions in securing specimens. In some cases the child that is in most need of the examination does not feel like, or does not bother to return the specimen.

The usual examination for intestinal parasites is an unpleasant task; then, too, only a limited number of specimens can be examined properly by one technician in one day.

THEORY OF EXPERIMENT: The presence of necator A. in the intestinal tract seems to set up certain reactions on the part of the host. The classical appearance of the patient is not altogether due to the secondary anemia as has been brought out by certain authorities. The most significant reaction is the associated eosinophilia.

Parenthetically, it may be stated that bronchial asthma is an allergic condition and also gives an eosinophilia. Scarlet Fever does likewise. In the former, sensitivity tests are used in determining the causative factor. In the latter the Dick Test is used to determine immunity. It seems logical to surmise an allergic condition set up on the part of the host in the case of hookworm infestation. The aggravating substance is probably in the juices from the glands in the head of the parasite.

EXPERIMENT: (1) A complement-fixation test was contemplated but the time ele-

ment and complicated technique would exclude its value. In a survey certain patients were found to have an unusually large number of ova. The first step was to secure parasites in order to prepare an "Antigen." Difficulties were met in an attempt to find worms after the usual method of administration of a vermifuge because of the large amount of feces. Finally it was decided to clear the intestinal tract first. The patient was not given a noon day meal. At 5 P. M. a dose of magnesium sulphate was given and only liquids given at night. On the following morning hexylresorcinol was given, followed in 4 hours by a second dose of magnesium sulphate and the stools collected. The liquid feces were strained through two thicknesses of gauze and the parasites were easily collected. The parasites were examined and identified as *nectur americanus*. The parasites were washed 3 times in normal salt solution. One gram of worms was placed in 10 cc of 95% alcohol and macerated thoroughly. The emulsion was allowed to set for 96 hours with occasional agitation and at a temperature of 40° C. The emulsion was transferred to an evaporating dish and dried by means of a fan. After desiccation 10 cc of normal salt solution was added. This was allowed to stand for 4 hours with frequent agitation, and was then filtered. The residue was discarded. The filtrate was transferred to a sterile rubber capped dark glass bottle and heated to 60° C. for 45 minutes as is the usual method for sterilizing typhoid bacterin. One drop of phenol was added as a preservative. A culture on broth was negative.

Twenty-four of the 30 known positive cases showed a positive reaction much like the tuberculin reaction. All negative cases showed negative skin tests.

EXPERIMENT: (2) It is possible that treating the protein of the antigen with alcohol and acetone caused a chemical change of the antigenistic substance in experiment one and thus gave some false reactions. Therefore, precautions were taken in the second experiment to prevent any great upset in the chemical nature of the protein. One gram of *nectur americanus* was washed thoroughly three times

in normal salt solution, dried and macerated into a powder. Fifty percent glycerin and .5% phenol were added to make a 1-100 solution of the powder. The antigen was treated at 60° C. for 96 hours with occasional agitation. At the end of this period the solution was run through a coarse filter to remove any gross particles.

Twenty-five known positive cases and ten cases with negative stools were given three minims intradermally. The reactions were read in eight and 24 hours. At the eight hour reading the immediate hyperemia in all negative cases except one had subsided. In the positive cases there was hyperemia and swelling at the sight of injection. The 24 hour reading showed some beginning subsidence of all positives and of the one negative case which had showed a positive reaction. A Brine Floatation examination was made on the false positive case but no ova were found.

CONCLUSION

Necator americanus seems to cause a systemic reaction in the host. An intradermal screen test should be developed in order to diagnose uncinariasis in hookworm surveys, and experiments along this line are reported.

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Some Considerations Regarding Constipation

J. W. KITCHIN, M.D.

LIBERTY, S. C.

Osler once remarked that "Constipation rules the nation, and if it were not for curves and strictures, bowels would move the same as pictures." Perhaps no truer statement has been made regarding constipation and were that great clinician alive today he would still say that this condition is of paramount importance and rules as king of all intestinal disorders in man. It is certainly the most common ailment.

As we have seen patients from all walks of life and, during the course of our history taking or examination, have asked the question, "Are you constipated?" we have come to expect the great majority to answer in the affirmative. Having secured our information, however, are we prepared to help him in his distress and to give him relief from this all-important condition which may be causing him more discomfort than the disease which brought him to the office?

It is not my purpose to present a detailed discussion of the causes of constipation or of the underlying pathological processes nor to attempt some new classification, but rather to discuss the condition in broad outline and to stress the one fundamental principle that each individual with constipation presents an individual problem and that if we are to secure the best results in our treatment we must ever handle each case per se. Furthermore, we must be willing to take time, in some instances a great deal of time, to inquire into the past history and to determine the patient's habits of living and of eating and of elimination as well as to perform a careful examination if we are to be in a position where we can properly advise him as to his future course.

Some individuals appear to be more prone to constipation than others. In a study of several thousand cases, Kantor¹ found that women were more subject to this disorder than men. Brown eyed persons are more frequently affected than blue eyed. In children, the city child is more often constipated than the country

child, and in babies, the bottle fed is more liable to have trouble than the breast fed.

Morgan² states that 85% of all cases of constipation are functional, and in nearly all instances it is an acquired condition resulting from faulty habits.

Atonic constipation is well recognized as is the spastic type, and often these two types are seen together. The patient with atonic constipation is the one who walks into the office with the statement that he has had to take this and that laxative through the years and that if he doesn't take some such drug his bowels will not move. He will tell of some new laxative he has heard of over the radio or read about in an advertisement and will want to know whether it is the one he has been needing for these many years. We see this type of patient every day, and all he usually needs is good sound advice.

Another group of individuals who tend to suffer from constipation are those who are victims of diabetes, cretinism, hemorrhoids, rectal fistula, neurosis, gall bladder disease, and chronic appendicitis. The success in treating these cases comes from a careful examination and the making of a correct diagnosis. Take time with these patients, since it may be a simple local condition which is causing the entire trouble, and you will be more than repaid for what you do.

Constipation also occurs in the presence of an inadequate diet. The inadequacy of diet may be due to poverty, ignorance, indifference, or the desire to follow the dictates of fashion or of fad. Women are especially prone to suffer from this type of constipation with their indulgence in the knickknacks and rich food which go with bridge games and parties of all types.

Another type of individual who may become subject to constipation is the one who is afraid to eat because of the ensuing pain, or is afraid to eat because of the danger of gaining weight. This person is termed a phagaphobia type.

¹Read before S. C. Medical Association, April, 1941.

Closely allied to him the sitaphobia type, the one who fears the sight of food.

Finally there is the group who are composed of individuals who are always in a hurry. No matter what they do they do it in a rush. In fact, they are in such a rush when they come to the doctor's office that they do not have time for a thorough examination. "I must get to the office immediately," or "I must rush to school," or "I will be late if I don't hurry," is the excuse they make. It is only natural that in their onward rush through life they should find no time to answer nature's call to defecate. This failure to react to the natural stimulus leads on to a gradual diminution of the strength of the stimulus and resulting constipation.

I have presented, in cross section, the patients who are constantly coming to our offices. Remarkably few of these patients come to the physician just to be treated for constipation and it is not my purpose to advocate treating them for this condition alone, but I do think that every intestinal disorder with accompanying constipation should be given a careful examination and a strict regime to be followed with regard to the avoidance of constipation. There are hundreds of individuals walking the streets today who would invest the greater part of their wealth in order to have, once more, a natural bowel movement each day.

As we consider the treatment, I would like to emphasize first that painstaking care should be expended in the examination of the rectum. Rectal constipation or dyschesia is common in a great many patients and herein may be the sole cause of the constipation. The rectum always has some fecal material in it. If this fecal material is allowed to accumulate after nature has called, the musculature is affected, as pointed out by Hunt⁴. Hunt says, "The habitual neglect of the call to defecate leads to the accumulation of the feces in the rectum and pelvic colon which becomes distended. The distension diminishes the tone and impairs the contractability of the musculature. The weakened muscular coat is incompetent to do its work, and even if great effort be made, evacuation is incomplete." Hemorrhoids, fistulae, and abscesses are seen and these, because of the

pain, cause the patients to decline the act of defecation with a resulting accumulation of feces in the rectum.

Kantor states that the redundant colon is a common cause for constipation¹. The redundant loop causes obstruction to the entrance of the fecal matter into the rectum. In the visceroptotic patient there is nearly always some type of constipation.

In dealing with constipation in children we frequently find that the main problem does not lie in the child but in the mother or grandmother who insists on giving a laxative if the bowels fail to move after one day. A child can go for three days without a stool and still not be constipated. If the child has a soft normal stool on the third day, that child does not need a laxative; but if the stool is hard and dry, it is constipated. Incidentally, bottle fed babies are more prone to be constipated than breast fed, the latter being rarely bothered with this condition.

Babies should be put on a stool regularly and be encouraged to form regular habits of defecation, habits which will be of great value in their normal development. This habit can be established in six months old infants.

Children, from one to two years of age, frequently become constipated because of lack of bulk in the diet for intestinal stimulation. Strained vegetables are good for the baby but they are to be deplored in the older child because of their lack of bulk.

In all children, exercise and regular habits of eating and sleeping are of great value. If a child is really constipated, Hole and McIntosh⁵ recommend molasses and honey with their meals, and this has given excellent results in many patients.

Medicines, enemas, and suppositories should not be used. Mineral oil or petrolagar, which are not laxatives but rather lubricants and bulk adding substances, can be used with success. A watery stool which results from a laxative is an indication of an overdose of the drug. Constipation is uncalled for in infants and younger children if the mother is intelligent and will follow the physician's orders.

What should be our procedure in the treatment of adults who suffer from constipation?

First of all, no case of constipation should be treated routinely, and this point should ever be borne in mind.

Cooperation between the patient and physician is extremely important, as is mutual confidence. This is especially true in the individual who is habitually constipated. This person is constantly possessed with the fear of abnormal bowel action and is taking something each day merely through habit.

If a patient could be shown by X-ray the movement of barium through his intestinal tract, shown how it moves hourly and regularly from the stomach down to the rectum, much of his fear would be eliminated. No matter how spastic or how atonic the bowel may be, the barium moves down the intestinal tract and this simple fact should be clearly established in the mind of the patient.

Those cases which are due to such diseases as diabetes, chronic gallbladder disease, hypothyroidism, or chronic appendicitis should be treated by treating the underlying malady. Local causes such as hemorrhoids, fistulae, and carcinoma should be treated surgically if possible. These conditions account for a very small percentage of constipation, yet they are extremely important.

In the atonic type of constipation, the patient's general condition should be improved. Bulk should be added to the smooth bland diet. Fruits and fats in abundance, and more recently Vitamin B, have been noted to improve the tone of the bowels musculature.

Spastic constipation, often seen with the atonic type or existing alone, is best treated by adding roughage to the diet and affording rest for the patient. Mild sedation may be necessary. Another valuable aid is the giving of from 15 to 21 drops of tincture of belladonna before meals.

I have obtained good results and often cure in the visceroptosis group by merely applying an abdominal support, and by allowing the patient to lie on the abdomen for thirty minutes after each meal.

In those patients who suffer from habitual constipation, the following schedule of treatment has proven beneficial; "At bed time, eat a bowl of stewed prunes and take a tablespoon-

ful of mineral oil or some agar-agar preparation. Upon arising, drink a full glass of water to which has been added a half teaspoonful of table salt and a teaspoonful of glycerine. Drink fruit juice and eat the regular breakfast. After breakfast, go to the stool at the same time each day and remain there five to ten minutes regardless of whether the bowels move or not. Drink eight to ten glasses of cool water during the day." This advice may not produce results during the first few weeks, but if the patient is persistent a gradual return of the normal bowel activity will be noted.

Warm tub baths may be helpful, particularly in the type of constipation due to a spastic colon. Cold showers also increase the tone of the bowels and are helpful in the atonic type.

In some forms of constipation bulk forming laxatives are advocated. From personal experience, I have found that they may produce more harm than good. Be careful of giving this form of medication if you suspect adhesions in the intestinal tract, and this again demonstrates the need for individualism in the treatment of constipation.

I am convinced that if time is taken to diagnose the cause of constipation and careful attention is paid to the characteristics of the individual who is its victim, the treatment of the condition is frequently simple, so simple in fact that the adjustment of some little thing will lead to improvement or permanent cure.

The disorder, called constipation, is an unnecessary evil which man has inflicted upon himself all too frequently, and if we, as practitioners, would be more concerned with details and would sacrifice a little more of our time for our patients who are suffering from this evil, we would not need to say as Pottinger once said, "There is a patient who has the disease as well as a disease that has the patient."

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DISCUSSION

DR DOUGLAS REMSEN, CHARLESTON:

Mr. President and members of the Association, Dr. Kitchen has quoted Dr. Osler in saying constipation rules the nation. I think that is the reason that some of our newspapers would be fortunate if some of our current administrators in Washington could be referred to Dr. Kitchen.

It is quite true, I think, that half of our population at one time or another do suffer with constipation. As Dr. Kitchen has pointed out, it is very important that the individual be considered as an individual problem. The common factor, of course, is the colon.

There have been occasions when colectomies were done and also occasions when bacteriological studies led to attempts to change the intestinal flora. This has been successful only in a limited number of instances.

The point is that we must consider not only the anatomical and physical characteristics of the individual but also of any form of physiological activity carried out.

Certainly it is true in some instances that not only does one find an atonic colon but a spastic colon. In some individuals both are present; that is, atony of the descending colon and spasticity of the ascending colon. It is absurd to think that one laxative or one kind of food will take care of both.

DR. W. H. POWE, GREENVILLE:

Dr. Kitchen has given a very timely paper. He covered local disease in the rectum as frequently causing constipation, but he did not mention specifically one which I have encountered a good many times—perhaps because I have been looking for it. That is fissure in ano, a little ulceration in the mucosa. I have been surprised how many people have this condition. The reason it causes constipation is because defecation of a hard stool is painful. It is a condition that can be relieved very readily by local treatment. I think if you look for that condition you will find it more frequently. I know I have found it more often because I have been looking for it.

DR. J. M. FEWELL, GREENVILLE:

I should like to ask Dr. Kitchen a question. When is a patient constipated? I recall very well one young lady who was in as good health as anybody I have ever seen; in fact, she had charge of the athletics in a high school, and she had had all her life only one stool a week. I have known other people who had only one stool in two weeks, and I heard of one case who had only one stool every three months,

and yet these people were apparently normal. I think a lot of constipation is mental. Dr. Kitchen brought out the idea of habit, and I think constipation should be described as a bad habit. If we can correct that bad habit I think we shall have gone a long way.

There is just one little thing I wish to comment on. Dr. Kitchen mentioned the fact that the patient should go to stool every morning. Of course, that is a great help in forming the habit. I remember when I was taught this idea I was also told to tell the patient not to carry a newspaper with him, that he should go with the idea of having a stool and nothing should deter him from that act.

I think Dr. Kitchen has certainly brought up a very important subject and one which should be studied by the men in every form of practice, and not only the men in general practice, because it is certainly a hard thing to handle.

DR. KITCHIN, CLOSING THE DISCUSSION:

In answer to Dr. Fewell's remarks, it is true that fissure is the most common condition that is seen in the rectum, and I think if we general practitioners would do more rectal examinations we would find a lot of them. We always look in the throat and sometimes in the ears but seldom look in the rectum. I think this is a very common place to find many disorders in constipation. Fissure is one of the evils we find there.

Regarding Dr. Fewell's question as to when a patient is constipated, it seems to me that his idea of the psychic reaction which the patient has is true. It is perfectly true that some people can go a week without having a bowel action. If that person does not have a dry, hard stool he is not constipated.

I think regular habit is most important. As regards the newspaper, I think Dr. Fewell's comment is good; the patient should go with the idea of defecating and nothing else. The same thing is true about reading a newspaper at the breakfast table or the dinner table; the food does not digest as well.

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Office of Publication: (In care of the Editor)
Subscription Price

Florence, S. C.
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OCTOBER, 1941

LOOKING AHEAD

What is the present status with regard to medical care in South Carolina and what is the outlook for the future?

The last census gave South Carolina a population of 1,899,804. It has been stated that the ratio of one physician to 1,100 of population is necessary for the minimum of good medical care. According to this figure, South Carolina should have 1,727 active physicians to render the people of the state adequate medical care. That this number of physicians could find sufficient work to keep them busy is acknowledged, but that this number could make a living out of medical practice in this state is problematical. Economic conditions in South Carolina are such that in many areas, particularly rural areas with a high percentage of tenant farmers, more than 1,100 people will be necessary to guarantee a physician a living. We may safely assume, however, that South Carolina can support and certainly needs at least 1,400 active physicians.

What is the condition which exists today? According to the latest statistics released by the American Medical Association (April 1, 1941), there are 181,351 physicians in the United States and of these 1,434 are located in South Carolina. From these figures one would assume that the state has all the physicians necessary at the present time. But this is far from the case as a detailed study will show (and such a study was carried out during the past summer by the Council of the

South Carolina Medical Association and is summarized in the chart). Investigation showed that of these 1,434 physicians over ninety had been called to the service of the armed forces of the United States and approximately three hundred were physicians who had retired or else were carrying on activities outside of the field of medicine. Thus clarifying the record, it was found that there were (as of July, 1941) 1,061 physicians who are actively engaged in medical work in South Carolina, and this number includes all physicians who are active whether in actual practice, institutional work, public health work, or teaching. Several physicians have been called to the colors since the study was made and the actual number today is approximately 1,050.

Ten thousand and fifty active physicians in South Carolina gives a ratio of one active physician to every 1,836 of population. This statement should be carefully considered by every individual who is concerned with the best interests of the people of this state.

What of the future? This is a day of national emergency. South Carolinians are noted for their hot-headed patriotism and the records of the last war and of the present Medical Reserve Corps will show that the physicians located in the state are fashioned according to the same pattern. These physicians wholeheartedly endorse the program of national defense and pledge their willingness to do all they are asked to do, but they are also cognizant of their responsibility to the civilian popula-

tion. Dr. John Smith will gladly serve his country if he is called but he is reticent about volunteering when he realizes his going will leave the little town of Smithville, where he is practicing, bereft of the services of a physician. And what is true of Dr. John Smith is equally true of many, many physicians in this and other states.

The greatest need of the moment is that of a plan, worked out on a national basis, which will insure adequate medical personnel for the armed forces of the nation and will at the same time leave enough physicians in each state and in each community to provide at least the minimum of good medical care. If that is true today, how much truer will it be tomorrow if the day of general mobilization comes with its need for ten or twenty thousand more physicians in the army.

Such a plan, recommended by the House of Delegates of the American Medical Association, is under consideration in Washington and it is the hope of this Journal and of every farsighted physician in the state that this plan will be put into execution in the immediate future.

What of the more distant future? This war, like all other wars, must come to an end some day and it is not too early to plan for that eventful era. Then, as now, South Carolina

will need physicians who can render medical care to her people. Should all of her medical sons who are now, or who will be, in the service return to her fold there will still be too few physicians to render the adequate minimum of medical care to which the people of this state are entitled. This then is not the time to curtail the efforts of those who are engaged in the work of training physicians but rather the day in which to uphold their hands and to render them every aid possible.

The vast majority of physicians now engaged in the practice of medicine in South Carolina received their special medical education at the state's own school, The Medical College of the State of South Carolina, and there is no reason or evidence to suggest that the condition ten or twenty years from now will be any different. To provide for the medical care of the people of this state, therefore, be it for the near or for the distant future, is to provide for the maintenance and improvement of this medical school. Young men should be encouraged to go into the practice of medicine, and adequate facilities and funds should be afforded those who are entrusted with the operation of the Medical College to insure its life and growth. It is only as this is done that the people of South Carolina can be said to have taken the first step toward providing the populace with adequate medical care.

Physicians in South Carolina

County	Population	Active Physi- cians	Ratio Phys.: Pop.	County	Population	Active Physi- cians	Ratio Phys.: Pop.
Abbeville	22,931	9	1: 2548	Jasper	11,011	5	1: 2202
Aiken	49,916	20	1: 2495	Kershaw	32,913	11	1: 2992
Allendale	13,040	7	1: 1879	Lancaster	33,542	11	1: 3049
Anderson	88,712	48	1: 1848	Laurens	44,185	24	1: 1841
Bamberg	18,643	9	1: 2072	Lee	24,908	8	1: 3113
Barnwell	20,138	7	1: 2877	Lexington	35,994	9	1: 3999
Beaufort	22,037	9	1: 2448	McCormick	10,367	2	1: 5184
Berkley	27,128	9	1: 3014	Marion	30,107	16	1: 1881
Calhoun	16,229	7	1: 2318	Marlboro	33,281	12	1: 2940
Charleston	121,105	122	1: 992	Newberry	33,577	16	1: 2099
Cherokee	33,290	12	1: 2774	Oconee	36,512	14	1: 2608
Chester	32,597	13	1: 2506	Orangeburg	63,707	28	1: 2275
Chesterfield	35,963	12	1: 2977	Pickens	37,111	12	1: 3090
Colleton	26,268	10	1: 2626	Richland	104,843	100	1: 1048
Clarendon	31,500	9	1: 3500	Saluda	17,192	6	1: 2865
Darlington	45,198	17	1: 2659	Spartanburg	127,733	81	1: 1577
Dillon	29,625	12	1: 2469	Sumter	52,463	29	1: 1809
Dorchester	19,928	9	1: 2214	Union	31,360	12	1: 2590
Edgefield	17,894	6	1: 2981	Williamsburg	41,011	16	1: 2734
Fairfield	24,187	5	1: 4837	York	58,663	31	1: 1893
Florence	70,582	45	1: 1567	State Tbc.	}	34	
Georgetown	26,352	9	1: 2928	State Psych.			
Greenville	136,580	93	1: 1468	State Bd.			
Greenwood	40,083	24	1: 1662	of Health			
Hampton	17,465	8	1: 2183				
Horry	51,951	12	1: 4329	Total	1,899,804	1061	1: 1790

The population figures are those of the last census. The figures referring to active physicians are obtained from data collected between July 1 and July 15, 1941, and are accurate as of that period.

PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

THE VITAMIN B COMPLEX

Roe E. Remington, Ph.D.

Charleston, S. C.

The role of the B vitamins in nutrition has been so widely publicized that many of the laity talk glibly of the "B complex" or thiamin, or nicotinic acid. In fact information in popular form is becoming so wide-spread that the physician is in some danger of finding patients who know, or think they know, more about vitamins than he does himself. I am continually surprised at the number among my circle of acquaintances, people of at least reasonable intelligence, who purchase and use without medical advice various forms of vitamin tablets, capsules, or elixers.

In setting up standards for the daily requirements of these vitamins, that is to say the amount needed daily to maintain active health in adults and provide for development in children, the Committee on Food and Nutrition of the National Research Council makes the significant statement that "these allowances can be met by a good diet of natural foods, and this will also provide other minerals and vitamins, the requirements for which are less well known." First emphasis should be placed on the words "natural foods." About 20% of the energy (calorie) value of the average American dietary is derived from refined sugar, and another 25% from highly milled flour and bread; both substances being practically devoid of vitamins (and important minerals as well), and hence to be classed as denatured rather than "natural" foods. The difficulty of so selecting the remaining 50 or 55% of the diet as to carry all the necessary protective factors is what makes so many habitual dietaries, among the well-to-do as well as the poor, inadequate for full protection against deficiency diseases. In the South the custom of using white grits and polished rice instead of vegetables makes the problem additionally difficult.

I should also like to emphasize the phrase "other minerals and vitamins the requirements for which are less well known." That is to say, while thiamin, riboflavin and nicotinic acid are recognized as necessary and are available in pure crystalline form in every drug store, animal experimentation has shown that there are five or six other vitamins present in the B complex which are not so available outside of foods, and the daily requirements for which have not been measured, and there are undoubtedly others undiscovered. These less well known factors have to be supplied, and at present cannot be supplied outside of the foods which naturally contain them. Synthetic vitamins are frequently of dramatic value in relieving acute deficiency conditions, but so many times we have seen, as in the treatment of acute pellagra with pure nicotinic acid, one train of symptoms subsiding only to be replaced by another. This tells us, as indeed our own common-sense should tell us, that any self-selected human diet that will produce pellagra, will also produce other deficiencies due to lack of known and unknown vitamins which always occur along with the pellagra-preventive factor in foods.

Such synthetics have no place outside the prescription desk. Perhaps the main reason is the one which I have gone to some pains to develop at length; the failure to correct deficiencies of less well known vitamins. Also, although it is generally stated that large doses are not harmful, a case has been reported of sensitivity to 10 milligrams per day of thiamin, and nicotinic acid cannot be given in relatively large doses without unpleasant symptoms. These products are too new for the establishment of safe limits for continued use. The third reason is that there is a balance between or among vitamin functions in the body, and overdosing with one or more may bring about a relative deficiency of others.

Deficiency diseases of the kind we are dis-

cussing here were practically unknown among our pioneer ancestors who from necessity rather than from choice ate their grain whole or merely cracked, baked their bread from unbolted meal, and made large use of roots and greens from the kitchen garden. To them white sugar was a great luxury; for sweetening they used the boiled-down juice of cane or sorghum, dark in color and strong in flavor, but rich in calcium and iron and some of the vitamins. Fruits and greens may lose as much as 50% of their content of some of the vitamins in the time that it takes to transport them to city markets and in cooking in the home. Losses in cooking can be reduced if air is kept out by using a covered vessel and if the "pot-likker" is saved and used.

No amount of advice from the consulting room will persuade any but the dietary enthusiast to go back to the crude diet of the pioneer. Sugar, polished rice, and white flour are here to stay. Enriched flour now available restores the calcium, iron, thiamin, nicotinic acid and riboflavin that have been lost in the milling process. For the less well known factors we shall have to rely on increased emphasis on the use of milk, liver, kidney, and raw and properly cooked fruits and vegetables. At present, at least, the prescription shelf fails us when it comes to the permanent relief of dietary deficiency diseases.

CONTROL OF LACTATION

J. Dechard Guess, M.D.
Greenville, S. C.

Although it is a fact that since the time when the mind of man runneth not to the contrary many remedial measures have been devised to bring about involution of the lactating breast, still the chief factors operative to this result have been the cessation of the stimulation of nursing and the continuous unrelieved pressure in and around the gland acini resulting from failure to empty the breast. Applications of belladonna ointment sometimes resulted in poisoning, but had no effect upon the physiologic breast activity. Massage rendered the breast more comfortable by emptying it at least to some degree, and so alleviated discom-

fort but retarded nature's method of stopping its secretion. At times massage widely scattered an infection which previously had been localized but never hastened involution. Pumping the breast had a similar action and result to massage. Hot fomentations and cold applications were comforting but added nothing to the primary aim of bringing about cessation of lactation.

It has been recognized for many years that the breasts were subject to endocrine control, and that during pregnancy the glands actually increased in size by a true growth process, and this growth was believed to be due to the stimulation of some hormone elaborated as a part of the activity of the pregnant state. Furthermore, it was believed that after labor, either a new hormone came into play to cause lactation, or there was lost an inhibiting endocrine whose absence allowed the gland to assume the activity of lactation. It was known that when lactation stopped, the gland involuted in a manner comparable with that of the uterus, and that many of the acini actually disappeared.

The present conception is that the hormone causing growth and lactation of the mammary gland originates in the anterior pituitary gland, and that inhibition of anterior pituitary activity prevents lactation prior to delivery. The inhibiting substance seems to be estrogen, which is present in the blood in large amounts during pregnancy and whose level falls shortly before labor.

These ideas naturally suggested that if the blood level of estrogen were raised by its parenteral administration, the stimulus to lactation would be checked and ultimately the breasts would dry up. This has proven to be the case, and has given the physician a means of inducing involution without the old discomforts of prolonged engorgement. Further, the more discriminate and less prolonged use of the method will prevent or alleviate the engorgement at the beginning of lactation, or that of a short period when for any reason the baby can not nurse for a day or two.

To rapidly initiate involution, without the old discomforts, it is suggested that relatively large doses, say 5000 rat units of Progynon-B or 10,000 international units of theelin be given

daily for four or five days. There is some evidence to indicate that the estrogen, stilbestrol, is equally as good and even better if only a temporary cessation of lactation is sought. However, this substance is not yet commercially available.

Since the action of estrogen in bringing about cessation of lactation and ultimate involution is through its inhibiting action on the anterior pituitary, and since it had been discovered that testosterone has such an inhibitory action, it is quite natural that the administration of testosterone propionate should be suggested to accomplish this action on the mammary gland. It seems to be equally as efficacious, but is more expensive than estrogen. Twenty-five mgm. daily for several days may, however, be used safely for this purpose if desired.

There is then available new methods of hastening and making more comfortable the cessation of lactation and the involution of the

breasts. But quite probably these methods have a more significant value than this hastening and making more comfortable. Some workers seem to have found a highly suggestive if not actual causal relationship between breast cancer and sudden stoppage of lactation by the method of simply taking the baby off of the breast. If the observation is actually true, then a general application of the newer methods may lower the incidence of mammary cancer.

"Depression or No Depression, War or No. War"

Since 1930, month after month, a unique series of educational to-the public advertisements have appeared on the first page of *Hygeia*. The sponsor's name, Mead Johnson & Company, has to be looked for with a magnifying glass, and appears only for copyright purposes. Not a product is ballyhooed. Instead, appears good, clean, convincing reasons, with choice illustrations, why mothers should seek pediatric advice from their physicians.

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1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph., Gon. & Ven. Dis.*, 23, 201 (March), 1939.

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AROUND THE STATE

Effort will be made to secure and publish news concerning the activities of individual physicians, and of the various medical societies of the state. Members of the Association, and especially secretaries of county societies, are urged to send in news items to the Editor.

DEATHS

David O. DuBose, 59, died while at work in his office in Andrews, South Carolina on September 9, 1941.

Born in Lydia, South Carolina, he graduated from the University of Maryland Medical School in 1909. Following a short period of practice in West Virginia and then in Little Rock, S. C., he moved to Andrews in 1917 where he carried on his work until the year of his death.

Dr. DuBose was a general practitioner and a family physician in the highest sense of the word. During his quarter of a century of service in Andrews he became the leading citizen and the best loved individual. Those who knew him and loved him came to his funeral, rich and poor, white and colored, and the little community of Andrews itself closed all its stores, and business establishments, and lumber mills, for the hour of the services as a tribute to the man who had served them day and night for twenty-five years.

Dr. DuBose is survived by his wife and one daughter, Mrs. R. W. Eutsler.

Dr. Manly Coke Smith, 54, of Simpsonville, who had been in failing health for several years died at Myrtle Beach while on a vacation. A graduate of the University of Maryland Medical School, Dr. Smith began his practice of medicine in this state in 1913, and has been identified with Simpsonville since that time. He is survived by his wife.

News has been received of the death of Dr. Holland M. Carter of Smoaks. Dr. Carter was born in 1877 and was graduated from the Medical College of the State of South Carolina in 1903. After his graduation he settled in Smoaks where he was engaged in general practice up until the time of his death. He is survived by his wife, two sons and one grandchild.

Friends of Dr. William Gamble of Bay City, Michigan, will be distressed to learn of the tragic death of his wife and oldest son in a motor boat accident on Lake Huron. Dr. Gamble is a graduate of the Medical College of the State of South Carolina and was formerly a member of the teaching staff of that institution.

NEWS ITEMS

Dean Robert Wilson announces that the usual Founders Day exercises of the Medical College of the State of South Carolina will be held this year on November 6, with Dr. R. A. Ross, Associate Professor of Obstetrics and Gynecology at Duke University delivering the annual address. Details of the program will appear in the next issue of the Journal.

Dr. Jennings K. Owens, recently graduated from the Medical College of the State of South Carolina, is now located in Bennettsville, his home town, where he is engaged in the practice of medicine.

Dr. William G. Morehouse has closed his office in Spartanburg and is now studying psychiatry at the State Hospital in Columbia.

Sixty medical officers from Camp Croft are now associate members of the Spartanburg County Medical Society.

Completion of the Simon Baruch Memorial Auditorium and the adjacent wing to the Medical College of the State of South Carolina, delayed by difficulty in obtaining construction materials because of defense work, is scheduled for October 30th.

The new construction is financed through a gift by Bernard M. Baruch and is a memorial to his father. The auditorium will have a ground floor seating capacity of more than three hundred and the balcony will seat one hundred and twenty people.

Announcement has been made of the engagement of Miss Finley Plunkett of Aiken, South Carolina to Dr. Robert B. Stith, Jr.

of Florence, South Carolina. The wedding to take place in December.

Elsewhere in this Journal is printed a paper on Hookworm by Dr. James C. Brabham. When the paper was submitted to the editor the following note was attached.

"I haven't forgotten a case I sent to you some years ago with the diagnosis of sub-acute appendicitis. You cured the 'appendicitis' with a vermifuge. That was quite a jolt for a 'wise' young fellow just out of medical school."

Captain M. M. Kane, Medical Corps, has been stationed at Camden, South Carolina where he will be in charge of Unit Number 7 during Maneuvers. Captain Kane was formerly located in Greenville, Ohio and was a member of the Ohio State Medical Association.

The Greenville County Medical Society and the Woman's Auxiliary of the Greenville County Medical Society were sponsors of a drive during September to create interest in the work of Cancer Control. Mrs. John Drake of Bennettsville, Commander of the Women's Field Army of the American Society for the Control of Cancer, was in charge of the rallies which were held in various communities throughout the county.

Announcement has been received of the marriage of Miss Nancy Margaret Keese of Westminster to Dr. Lane Elwood Mays of Fair Play and Greenville. Dr. Mays is serving his internship at General Hospital in Greenville.

Carrying on a precedent established several years ago, Drs. W. H. Carrigan and L. C. Stukes of Summerton have already sent in their check for dues for 1942 thus making them the first paid up members for the coming year.

Dr. Vernon L. Bauer has joined the staff of the Johnson Memorial Hospital at Henningway. Dr. Bauer was graduated from the Tulane School of Medicine in 1940 and has recently completed his internship at the Columbia Hospital.

Dr. S. Glenn Love, Rock Hill surgeon, has announced his retirement from active practice and plans to move to his country home at

McConnellsville. Dr. Love is Commander of the Rock Hill American Legion Post.

SOCIETY REPORTS

The Seventh District Medical Association held their autumn meeting at Pawley's Island on September 11th. A large crowd attended and the following papers were presented.

"Management of Toxemias of Pregnancy" by Dr. J. A. Sasser of Conway.

"Temporary Nerve Paralysis" by Dr. Frederick E. Kredel, Professor of Surgery, Medical College of the State of South Carolina, Charleston.

"Infestation of The Intestinal Tract" by Dr. Hal M. Davison, Atlanta, Georgia.

"Some Medical Problems" by Dr. George M. Truluck, Orangeburg, S. C., President of the South Carolina Medical Association.

"Some Conditions Simulating Heart Emergencies" by Dr. T. R. Littlejohn, Sumter, S. C.

"Metal Replacement of the Hip Joint" by Dr. A. T. Moore, Columbia, S. C.

"Infantile Eczema" by Dr. Leon S. Bryan, Columbia, S. C.

Dr. Harrison H. Shoulders, Assistant Professor of Clinical Surgery, Vanderbilt University School of Medicine, addressed the Columbia Medical Society on September 7th. His subject was **Some Points on the Diagnosis of Acute Abdominal Conditions.**

Dr. Oscar Miller of Charlotte, N. C. was the guest speaker at the September meeting of the Spartanburg County Medical Society.

Dr. P. E. Huth of Sumter was the guest speaker at the September meeting of the Kershaw Medical Society. He discussed **Urinary Anomalies.**

The Edisto Medical Society met in Orangeburg on August 27th. Dr. S. B. McLendon was the guest speaker and presented a paper on **Neuro-syphilis and Its Treatment.**

Among the many medical meetings of this year one of the most timely and interesting is that of the Association of Military Surgeons of the United States to be held October 29th to November 1st, at the Brown

Hotel, Louisville, Kentucky. All members of the medical profession are invited to attend as guests and it is particularly hoped that as many members of the Medical Defense Committees as possible will come. The session concludes with a mass review of military medicine and an inspection of Fort Knox.

Dr. Robert B. Greenblatt, Professor of Experimental Medicine, University of Georgia Medical School, addressed the Florence County Medical Society at its September meeting on the subject "Endocrines in Gynecology."

The regular meeting of the Greenville County Medical Society took place on September 1st at the Poinsett Hotel. Mr. Proctor Bonham, President of the South Carolina Bar Association, was the guest speaker and Dr. Lonita Boggs of Greenville presented a paper on **Chemotherapy in Infectious Diarrhea with Sulfaguanidine**.

THE PIEDMONT POST-GRADUATE CLINICAL ASSEMBLY

Seven years ago Dr. J. R. McCord of Atlanta, under the sponsorship of the Children's Bureau, conducted a series of obstetrical seminars in South Carolina. One of these was held in Anderson. The attendance was good and the interest was unusual. As a result of this meeting, so ably conducted by Dr. McCord, there was organized what its sponsors were pleased to call, The Piedmont Post-Graduate Clinical Assembly. The late Dr. E. A. Hines, always an enthusiastic advocate of post-graduate study, took a leading part in the organization of the Assembly, and he was elected its first president. Dr. Hines was re-elected year after year for five years. He retired at his own request shortly before he died.

Each year since its organization, the Assembly has held its annual meeting in Anderson. At no meeting has any serious difficulty been experienced in securing able teachers to come and lecture to the group of approximately two hundred registrants. The medical profession of Anderson has supported the

organization with energy, enthusiasm, and money. They have been cheerfully assisted by other doctors from neighboring counties of South Carolina and Georgia.

The work of this group is the earliest effort in South Carolina to offer post-graduate medical instruction, barring, of course, the county society and State Association programs. It antedates efforts of the State Medical College to give a vacation seminar, the program of county obstetrical meetings inaugurated by the division of Maternal and Child Health of the State Board of Health and the super-educational programs of the Columbia and Greenville County Societies.

The programs of study provided by the Clinical Assembly are of such a high order and have proven to be of so much practical value to the practitioner that it is a pity that more men in the State do not avail themselves of the opportunity to attend.

The seventh annual meeting was held on September 9, 10 and 11. The actual total attendance is estimated to have been about 200, although there were only 96 paid registrations. The teachers this year came from medical centers extending from New York to New Orleans. Dr. Kenneth Lynch represented the State College. Dr. Robert Greenblatt came from the University of Georgia School of Medicine, Drs. T. R. Harrison and Arthur Grollman came from the new Bowman Gray School of Medicine in Winston-Salem, Dr. John A. Kelley came from the Memorial Hospital in New York and Dr. C. W. Roberts from Emory. Dr. Franklin B. Peck, an authority on insulin and its use in the treatment of diabetes mellitus came down from the Eli Lilly Research Laboratories, and Dr. H. Sheridan Baketel, left his desk as editor of *Medical Economics* to talk on the "Future Economic Status of the Physician." Dr. F. F. Boyce of New Orleans talked of his personal investigations and the investigations of others as to the causes of deaths in burns and discussed the prevention of such deaths.

Dr. Frank Wrenn discussed the experience of the Anderson County Hospital cancer clinic, one of the clinics operating under the State Aid Program. Finally Dr. Frank Coleman, of

Columbia, discussed in a most practical manner the problem of injuries of the chest.

The social high light of the Assembly was the annual banquet to which the ladies were invited for the first time. The address of the evening was made by Dr. Napoleon Hill, author and lecturer and at present, professor of Psychology at Presbyterian College in Clinton. His talk was inspirational and on the subject, "Going the Extra Mile."

The officers elected to guide the Assembly next year are, Dr. J. M. Feder, Anderson, President; Dr. Hugh Smith, Greenville; Dr. George Harper, Hartwell, Georgia; Dr. W. A. Strickland, Westminster; and Dr. Jim Hill, Abbeville, Vice-Presidents. Drs. A. L. Smethers and Herbert Blake, both of Anderson, were re-elected to the respective offices of Secretary-Treasurer and Registrar.

EDGAR ALFONSO HINES

Resolution Adopted by Piedmont Post-Graduate Clinical Assembly September 10, 1941

At this, the seventh annual meeting of the Piedmont Post-Graduate Clinical Assembly, it is fitting that we pay tribute to one who fathered this organization and acted as its efficient president for the first five years. I speak of our beloved member, Dr. Edgar Alfonso Hines, who died November 27, 1940.

Dr. Hines was editor of The Journal of the South Carolina Medical Association, Secretary-Treasurer of the South Carolina Medical Association for more than thirty years. For many years he was a member of the House of Delegates of the American Medical Association and may have been its oldest member in terms of years of service.

All branches of organized medicine were familiar to him. Last year he gave unlimited time and energy to the Medical Preparedness Program, this work being interrupted by his death.

This Committee proposes the following resolution:

WHEREAS, God in his great wisdom has taken our leader and faithful worker to his reward;

THEREFORE, BE IT RESOLVED, That we, the Piedmont Post-Graduate Clinical Assembly, have lost our oldest and most beloved member.

HUGH SMITH, M.D.

W. L. PRESSLY, M.D.

Committee

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The glamor of a new era in Charleston, in South Carolina, in America, and in the world is reflected in the columns of The News and Courier. With the world's greatest news services pouring thousands of words into the office each hour, with special correspondents in Washington, Columbia, and South Carolina towns and villages, this paper is superbly equipped to keep you completely informed and entertained.

The News and Courier

134 Meeting St.

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Established in 1803

MEDICAL SUMMARIES

In an article entitled **Coronary Disease and the Doctor** (Illinois Medical Journal, August, 1941) Dr. O. P. J. Falk discusses a subject which should be of paramount interest to every physician. His startling statement that "Statistics indicate that 40% of all physicians are destined to die of heart disease, and of that number half will develop some phase of coronary insufficiency. Of the 3633 deaths among A. M. A. members in 1940, 40% were caused by heart disease, of which 46% were of coronary origin," should cause every physician to pause and wonder as to his own future. Following a general discussion of the subject Dr. Falk draws the following conclusion:

"Statistics indicate that the mortality from coronary disease is mounting steadily, and that this trend is particularly evident among members of the medical profession itself. That this coronary destiny may not be the inevitable toll of an exacting and stressful professional life, but that it may be amenable to the influence of determinable factors, constitutes the constructive optimistic philosophy of this discussion. The hope that some modification of the apparent sentence passed upon us by destiny might be attained by a change in our mode of living and working, as middle life approaches, seems not beyond the possibility of realization. At the advent of middle age, all loads should be lightened, including fewer hours of application to duty, the elimination of non-essential activities, the cultivation of tranquility and deliberation of action, moderation in eating and rational dietary balance; a sensible attitude concerning tobacco and alcohol, the cultivation of friends and hobbies, more frequent periods of physical rest and mental relaxation along with appropriate recreation of the less strenuous sort thereby avoiding sudden and unaccustomed strain on the heart. Such precautions as these seem logical measures to follow for conserving cardiac reserve. Furthermore, it is felt that the adoption of a more tranquil and protective philosophy of life might even serve to neutralize the influence

of an unfavorable heredity or a hyperreacting temperament, so that one might reasonably hope to postpone, if not actually prevent, some of the tragic episodes of coronary disease so frequently encountered in the world of today."

In the **Management of Gonorrhoea** the sulfonamides are being used to a large extent. When and how they should be used, however, is a problem which confronts every practicing physician. In an attempt to help in the solving of this problem the Neisserian Medical Society of Massachusetts has summarized its findings in the New England Journal of Medicine, August 7, 1941. The report should be read in full but the following quotations will give the main points:

"Sulfanilamide should not be used in the treatment of gonococcal infections. Early reports of its high efficiency were commonly in error because of failure to evaluate cure by cultural methods. The immediate clinical response was good in a large number of cases, but subsequent clinical relapse was common, and cultural studies made by many later observers disclosed that innumerable asymptomatic carriers were being produced. These carriers remain potential spreaders of infection for many months.

"Sulfapyridine cures a much higher proportion of cases, but it causes more serious reactions than sulfanilamide does. Since a newer drug, sulfathiazole, is equally effective and causes few immediate reactions, this should be, at present, the drug of choice.

"There is such excellent evidence, based on careful and extensive cultural study, that sulfathiazole cures as high a proportion of gonococcal infections, in either sex, as any other sulfonamide now available. Of the failures, some do not respond at all, and the remainder either relapse or become asymptomatic carriers for variable periods.

"Although many excellent treatment schemes have been and are still used, the following dose has the advantage of being simple and

rapidly effective: 2 gm. daily for ten days; the daily dosage is usually divided into four doses of 0.5 gm. every four hours. The dose for children is 30 mg. per pound of body weight, but the total daily dose should not exceed 2 gm. The fluid intake should not be restricted.

"In men, if there has been no clinical improvement by the fifth day, the drug should be discontinued for the time being, for its continued use will accomplish no favorable result. The clinical picture in women is so often confused by other conditions, however, that it is the rule to give the full course in every case and to depend on bacteriologic study for proof of response.

"Infections that fail to respond to one course of sulfathiazole may often be cured by a second course, similar to the first, following a rest period of a week or ten days. More than two consecutive courses of the drug however, are of questionable value.

"In definite drug failures, careful search should be made for the possible cause of failure, and recourse should be had to local treatment. In some cases, fever therapy may be indicated.

"The patient should be kept under observation during the course of sulfathiazole therapy because reactions may occur as a result of the administration of any of the sulfonamides. If there is persistent vomiting, rash or other severe reaction, the drug should be discontinued. Moderate nausea will be reported by an occasional patient, but it not ordinarily a cause for stopping the drug. There is no need for determining blood levels when the recommended dose is used, for concentration of the drug in the blood seems to have no relation to the clinical or bacteriologic result. Blood counts and hemoglobin determinations may be indicated for some patients."

During February, 1941 the North Carolina Conference on Children in a Democracy was held in Raleigh. Many interesting papers were presented and among them was one by Wilburt C. Davidson, Dean of Duke University. In this article (N. C. Medical Journal, July, 1941) he makes the following statement regarding **Preventive Pediatrics**.

"Whether the cost is borne by taxation, private fees or local charity, prevention is the most important phase of pediatrics and should be extended both by general practitioners and by pediatricians. He who cures a disease may be the most skilful, but he who prevents it is the safest physician. Three-fourths of the quarter of a million annual deaths of American children can and should be prevented. Twenty-one per cent of these deaths are due to curable diseases, while 56 percent are caused by preventable conditions.

"During the past twenty years, the mortality among children has decreased 66 per cent. In 1920, one-fourth of all deaths were among children, but today the ratio has fallen to one-eighth. That this decrease is not entirely due to the falling birth rate is indicated by the fact that during this same period, the ratio of children to the total population fell only from 1 : 3 to 1 : 4. The need for the hospitalization of sick children should eventually decrease, as diphtheria, whooping cough, dysentery and typhoid fever become rarities; as pneumonia and meningitis are treated at home with sulfapyridine or other drugs; as congenital syphilis decreases through the expansion of the program for treating adults; and as nutritional problems are eradicated by the simplification of infant feeding and the dissemination of information on nutritional requirements.

"The importance of preventive pediatrics cannot be overemphasized, and it is in this field, as well as in practice, that pediatricians will always be needed."

There comes a time in the life of every physician when discouragement and a sense of futility seem to overwhelm him. Struggle as he may he appears to get nowhere and his work goes unappreciated. At such a time the tribute which is paid **To The Doctor** by Robert Louis Stevenson should be of value.

"There are men and classes of men that stand above the common herd; the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarelier still, the clergyman; the physician almost as a rule; He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only re-

membered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity, he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing."

"This year the United States has been visited by infantile paralysis of unusually wide dissemination and severity," *Hygeia, The Health Magazine* declares in an editorial in its October issue. "The opening of many schools in Pennsylvania was postponed on account of the spread of the disease. Up to the first of September, 18 deaths had been reported and more than 250 cases had occurred in the eleven eastern and central counties in the state. More than 60 cases had occurred in Passaic and Bergen counties in New Jersey. There had also been an extensive inci-

dence of infantile paralysis around Winnipeg, in northern Florida, Alabama, Georgia and Tennessee. Fortunately, the disease had not spread to any extent among the soldiers in our camps.

"Progress is being made steadily in adding to our knowledge of infantile paralysis. One of the most fascinating pieces of information was developed recently at the Johns Hopkins University Hospital, when Drs. David Bodian and H. A. Howe showed that the virus, or infectious agent, responsible for this disease, once reaching a nerve, will travel along that nerve at the rate of about 2.4 millimeters an hour. Two and four-tenths millimeters represents about 0.004 inch. Other research carried out in the same institution, supported incidentally by a grant from the Commonwealth Fund, indicated that the virus attacks various cells and various portions of the nervous system, sometimes indeed skipping enough cells so that paralysis does not occur. This accounts for the cases of infantile paralysis with fever and general illness but without paralysis. If, however, enough of the motor nerve cells are attacked by the virus in a certain area, the muscles concerned may lose their function. The investigators were able to prove also that it is quite possible for this virus to attack the brain and not at the same time the spinal cord.

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Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

Case of Dr. W. J. Ball

ABSTRACT NO. 420 (67752)

Student H. L. Holley, (presenting):

History: A 5 year old colored girl first admitted on 12-11-39 with cough, fever, and pain in stomach of two weeks duration and dyspnea of recent onset. Chest pain, dyspnea and augmentation of other symptoms with vomiting characterized the 24 hrs. prior to admission. Temp. 99.4 and remained here or around normal for 3 1-2 weeks with rise to 102.5 on 1-8-40 and elevation to 100-101 for next few days. Received digitalis and sulphapyridine. Discharged on 2-1-40.

Readmitted on 3-20-40 having remained in bed since discharge, but on 3-13-40 began having shortness of breath, became orthopneic, and developed generalized edema. Received diuretics and digitalis. Fever irregular with widely fluctuating pulse, but temp. leveled off and pulse more constant during few weeks before discharge on 6-6-40.

Final admission on 6-10-40 with shortness of breath and ankle edema.

Physical: (1st admission) T. 99.4, P. 140, R. 26, BP 104/42.

Examination revealed an acutely ill, dyspneic child. Skin and M. M. hot and moist. Pupils regular and reacted to light. Some discharge from the nose. Tonsils large and reddened. Superficial lymph nodes not enlarged. The chest was symmetrical, but expansion less on the right. There was dullness at the right base posteriorly with tubular breathing and fine rales. There was bronchovesicular breathing in the right upper lobe with many fine rales. Heart enlarged. Gallop rhythm with a to and fro murmur transmitted to back. Loud systolic murmur over whole precordium. Abdomen moderately distended. Liver and spleen palpable. On *second admission* the child was edematous. Coarse rales at both lung bases. BP 120/70. Pulse 122 and regular. Slight increase in cardiac dullness with palpable to and fro thrill and harsh murmur over all areas. Shifting dullness in abdomen; liver and spleen 3" below costal margin. On *3rd admission* findings essentially the same. Systolic murmur in 4th interspace 3cm. from midline described as loud, harsh, and grinding. Soft diastolic murmur at apex.

Laboratory:

Urinalysis:	12-12-39	7-13-40
How	Vd.	Vd.
Sp. Gr.	1.018	GNS
Reaction	Acid	Acid
Alb.	0	2 plus
Sugar	0	0
Acetone	0	0
Casts	0	3 plus
Blood	0	Occ.
Pus	2-3 HPF	10 HPF
Blood 12-12-39	6-11-40	
Hb. 7.5 gms.	9.5 gms.	
WBC 11,250	8,000	
Polys 66%	54%	

Sedimentation rate

12-12-39—16.5 mm. in 1 hr.
12 29-39—18 mm. in 1 hr.

EKG: 12-12-39 P. R. interval—.12 Low voltage T in leads 1, 2, and 3. 3-22-40 Prolonged P. R. interval. 7-13-40 Normal axis. P. 1, 2, definitely prominent. Blood cultures consistently negative. Serum proteins and Urea N. essentially normal during 2nd admission.

Course: On final admission course was fairly uneventful until 7-10-40 when temp. rose to 103.4. On 7-13-40 pt. complained of being unable to breathe and of pain about umbilicus. The precordium was heaving and pt. expired at 4:40 p. m. on 7-13-40.

Dr. Ball (conducting): Miss Carter, will you give us your impression of this case?

Student Carter: From the available clinical data I believe that a rheumatic infection is the most likely diagnosis. The onset with an upper respiratory infection together with the age, pulse and temperature are all in keeping with this diagnosis. The pulmonary findings can be explained on the basis of a rheumatic pneumonitis.

The lack of response to therapy might indicate that the rheumatic fever was superimposed on a congenital cardiac defect.

The palpable liver and spleen are of course explained on the basis of congestive failure. The murmurs may have been due to pericardial friction rubs, that is if one wishes to explain all the findings on the basis of rheumatic fever alone. The laboratory data is of little help. The blood counts show a slight leucocytosis and a few more polys than is normal. The sedimentation rates are not conclusive,

being about normal. The lengthening of the P-R interval suggests rheumatic fever, but there should be an accompanying right heart hypertrophy.

Dr. Ball: In summing up then what is your final diagnosis?

Student Carter: Rheumatic heart disease most probably superimposed on a congenital cardiac defect.

Dr. Ball: It is common to have rheumatic and congenital heart disease associated?

Student Carter: No, I don't believe it is the usual thing.

Dr. Ball: What sort of a congenital defect would you expect?

Student Carter: A patent ductus or an interventricular septal defect.

Dr. Ball: What are the signs of a patent ductus arteriosus?

Student Carter: First of all the murmur and then cyanosis and clubbed fingers.

Dr. Ball: There are lots of cases of patent ductus that do not have the latter two symptoms. What is the characteristic murmur of a patent ductus?

Student Carter: I think it is like the one we have here, a harsh, loud, humming or machinery-like murmur.

Dr. Ball: Is an interventricular septal defect consistent with the physical findings?

Student Carter: I do not believe it is as compatible as the patent ductus.

Dr. Ball: I may add that this child was one of twins and was much smaller and less active than the other sibling.

Mr. Bailey, what is your diagnosis?

Student Bailey: I agree that the best possibility is a rheumatic pancarditis together with a possible interventricular septal defect. It is hard to explain all the murmurs on the basis of rheumatism alone. The continuous humming-top murmur is characteristic of a patent ductus and the loud systolic murmur that we have here is the usual finding with a ventricular septal defect.

Dr. Ball: Do you ever get just a systolic murmur in a patent ductus?

Student Bailey: No, I don't believe you do.

Dr. Ball: Mr. Hart, what is your opinion?

Student Hart: I believe that a rheumatic infection alone better explains the entire picture. I don't think the murmur is characteristic of a patent ductus, although the low diastolic pressure would be consistent with such a lesion.

Dr. Ball: What do you expect to find pathologically?

Student Hart: There should be slight hypertrophy and dilatation, pericardial scarring and perhaps scarring and distortion of the mitral valve.

Dr. Ball: Do any members of the faculty have anything to add?

Dr. Kelley: This patient ran an irregular, but rather persistent temperature and some sort of

inflammatory disease must have been present as well as a congenital malformation of the heart.

Dr. Remsen: I think the lack of development of the child is an important point. The terrific murmur is not compatible with an early rheumatic heart.

Dr. Kredel: Since a patent ductus can be cured, I operated for such a condition but did not find one. Why the ductus should remain open in some cases we do not know but it has been found desirous to close those that remain patent whenever practicable. We operate because many develop congestive failure and others get a superimposed bacterial endocarditis. A child with a patent ductus does not have a life expectancy of more than 24.

Dr. Ball: The poor development of the child, the intensity and localization of the murmur, and the thrill led me to think that there was an interventricular defect. Others, apparently for the same reasons thought it was patent ductus. At operation Dr. Kredel found marked thrill over left ventricle, but no anomalies of the vessels. I thought pneumonia accounted for the signs of inflammation, but with the passage of time thought a subacute bacterial endocarditis more likely.

Dr. Lynch (Demonstrating heart): We may as well restrict the discussion to the term rheumatism because that is what this patient had.

The heart is definitely enlarged throughout; there is also some dilatation. In any case that lives for any length of time, we expect to find some evidence of hypertrophy from the stimulation of the myocarditis. There is nothing much to be seen grossly which has been a lesson for us. The ductus is completely obliterated and the septum is intact.

There are some petechial hemorrhages in the epicardium with some slight furring of its surface, but there is nothing recognizably wrong with the valves grossly.

On microscopic examination it is remarkable how much damage has been done, particularly since it does not manifest itself grossly. The myocardium is in extremely bad shape with spots of necrosis and some fibrous tissue increase from the prolonged course. There is a microscopic deposit of fibrin on the valves and endocardium with Aschoff bodies scattered throughout the heart substance. The latter are also in part of a vein at the base of the heart which might indicate a rheumatic involvement of the lung, although I haven't seen much of this; have seen vessels involved within lung, but this is about all. I too would have been puzzled by the conspicuousness of the heart murmurs and I don't exactly know how all the abnormal sounds could be explained. I think the pericarditis may have been more pronounced than it is at present. I do remember a conspicuous case of a rheumatic heart superimposed on an interventricular septal defect.

Dr. Beach: I frankly thought this was a case of a patent ductus for the following reasons. She seemed to be somewhat retarded physically, although

practically completely well for 5 years. Then with the onset of an upper respiratory infection she became acutely ill with a break in compensation. I didn't see how a severe machinery-like murmur taking up most of the cardiac cycle with a systolic accentuation and heard best to the left of sternum could be anything else than a patent ductus.

CLINICAL IMMUNOLOGY BIOTHERAPY AND CHEMOTHERAPY

In the Diagnosis, Prevention and Treatment of Disease, by John A. Kolmer, M.S., M.D., Dr. P.H., Sc.D., LL.D., L.H.D., F.A.C.P., Professor of Medicine, Temple University School of Medicine; Director of the Research Institute of Cutaneous Medicine; and Louis Tuft, M.D., Assistant Professor of Medicine and Chief of Clinic of Allergy and Applied Immunology, Temple University School of Medicine. 941 pages with 27 illustrations (including 11 color plates.) W. B. Saunders Company, Philadelphia and London. 1941. Price \$10.00.

A compilation of practical knowledge of the infectious and certain other diseases written in classi-

cal text book style. The first part consists of an up to date treatise on the fundamentals of infection and immunity. The last and larger part deals individually with the immune mechanisms, the diagnostic procedures, the methods of specific prophylaxis and treatment of bacterial, rickettsial, spirochetal, viral and protozoal diseases. Also included are sections on parental exclusion, blood transfusion and fever therapy, and on the treatment of allergic disease. The book is written for practitioners and teachers as well as for students of medicine and the technics described are those which the physician is called upon to perform in the management of actual cases.

Dr. Kolmer's experience ably qualifies him to write authoritatively on all important subjects in which infections and immune processes are concerned. This book is essentially a mature consideration of those materials. Considering the broad scope and variety of the subject matter it is remarkably free of errata. The portions dealing with the sulfonamide drugs unavoidably reflect the present lack of standardization in the use of this form of therapy. The index and bibliography are ample.

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DR. OR M.D.?

With every gymnast, music teacher, philosopher, and cultist calling himself "Doctor," it is no wonder that the public is becoming increasingly confused. Not only do correspondence school alumni with a yen for ornamentation use the "Doctor" labe, but many respectable citizens, like dentists and clergymen, have a legitimate claim to the title, too. It seems that the physician's best way of clearing out the fog is to exhibit the distinguishing "M.D." on his sign, letterhead, prescription blank and phone book. Eventually it will bite into public consciousness. In fact, it is even possible to stress "M.D." in speech. Thus, we ask a patient: "Were these eye-glasses prescribed by a physician?" He answers yes because he thinks that the optometrist is an "eye physician," but were we to ask if the glasses were prescribed by an M.D., the patient would get the point promptly.

While physicians may resent the growing dilution of the title "doctor," let it be remembered that the label was never our exclusive property anyway. On the other hand, "M.D.," that unmistakable touchstone of the doctor of medicine, is the insignia of a hard-earned professional status. It is a good point

to remember for the next order for check books or stationery. (Editorial, The Journal of the Medical Society of New Jersey).

A change in the spelling of the name "Petrolagar" to "Petrogalar" has been announced by the Petrogalar Laboratories. The change is being made in both the product name and corporate name.

Company officials, while pointing out that the adoption of the new spelling does not affect the formula or quality of the product in any way, said that they considered the change advisable to avoid any possible misconception as to the nature of the product.

"Because it has never been the intention of the company to imply that agar-agar was used for any other purpose than as an emulsifying agent, the last syllable of the former name has been altered in favor of the new spelling," officials said.

Officials emphasized that no change has been made in the size of the package, price, or formulae and that each of the five different types of the product will carry the new spelling "Petrogalar." The new corporate name is: Petrogalar Laboratories, Inc., and are address remains, 8134 McCormick Boulevard, Chicago, Illinois.

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WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

IS AN AUXILIARY AN ASSET TO A MEDICAL SOCIETY?

The medical profession has always held a place of honor and respect among the people of South Carolina. In order that this traditional position be maintained it is important that high ethical standards and harmony prevail throughout the profession. Members of the Medical Auxiliary to the South Carolina Medical Association deem it an honor and a privilege to assist in preserving these standards and promoting harmony wherever difficulties arise.

A flourishing auxiliary to the county medical society contributes not only to unity and good fellowship among the doctors and their families, but to the advancement of better health conditions in the community; for one of the principal objectives of the auxiliary is the dissemination of information on health.

Many county medical societies with full programs are realizing the value of having an organized, functioning group of sympathetic, understanding, earnest women who can be depended upon to assist them in the various community health, educational and social activities in which they are engaged. This has been clearly demonstrated by the replies received from the presidents of county auxiliaries to the question: How is your auxiliary assisting the county medical society. From these replies we have selected that of Mrs. M. Nachman, President of the Auxiliary to the Greenville County Medical Society, which follows:

"Dear Mrs. Lyday, In reply to your letter asking what our auxiliary does to assist the Greenville County Medical Society, I am sending this list: 1. At the request of our doctors, we solicited advertisements which financed

their publication, 'The Bulletin.' 2. We furnish and arrange flowers for their county medical society meetings the first Monday night in each month. 3. We have entertained the doctors at picnics. 4. At the request of the doctors, we are sponsoring a county-wide cancer control campaign, with several meetings over the county, Mrs. Drake, State Commander, to speak, auxiliary members as chairmen and some doctors to answer questions at each meeting. 5. We have assisted in health education throughout the county by radio broadcasts. 6. Honored county doctors on Doctor's Day with radio programs. 7. Created better relations by assisting in receiving visitors at the hospitals on Hospital Day. 8. We have promoted the distribution and sale of Hygeia magazine at the request of the American Medical Association. 9. We assisted the County Medical Society in entertaining the Annual Convention of the South Carolina Medical Association last April. Sincerely, Frances B. Nachman, President of the Auxiliary to the Greenville County Medical Society."

Aware of their responsibilities and opportunities auxiliary members are always ready to serve the County Society and the state association whenever called upon to do so.

The regular semi-annual Executive Board meeting of the Woman's Auxiliary to the South Carolina Medical Association was called at the home of the President, Mrs. R. M. Pollitzer, 32 West Hillcrest Drive, Greenville, S. C., at 11:30 a. m., October 8th. Luncheon was served at one o'clock. All officers, chairmen, councilors, past presidents, county auxiliary presidents and members of the advisory council were invited to attend.

THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

November, 1941

NUMBER 11

Treatment of Bronchial Asthma and Hay Fever With Cyclopropane

CARL A. SWEATMAN, M.D.
COLUMBIA, S. C.

The multiplicity of therapeutic agents recommended as beneficial in the treatment of asthma shows that many claims are not completely justifiable. In this paper, we are only giving a report of our experiences in the treatment of asthma and hay-fever with cyclopropane anaesthesia, the results have proved most interesting to us.

Our first experience with cyclopropane in asthmatics occurred accidentally. We had a patient with an acute appendix and due to an extremely "wet" chest cyclopropane was used as the anesthetic of choice. This was on April 3, 1939. During convalescence he drew our attention to the fact that his chronic asthmatic condition had disappeared. We wondered if the anaesthesia had had anything to do with it and decided to use it on another case. The results were again impressive.

Clinically, three main groups of asthmatics may be distinguished: (1) the allergic group, (2) the reflex group (3) the bronchitic group. There are many cases of asthma, however, which cannot be placed in any of the above groups. They do not present features sufficiently well understood to form a well-defined independent group. They may be associated with chronic sepsis, dyspepsia, or with a generally unstable nervous system.¹ The cases in this report treated with cyclopropane have been taken at random with no effort made to classify them into any of the above groups.

Cyclopropane is a saturated hydrocarbon gas

prepared by the reduction of an alcoholic solution of trimethylene bromide in the presence of metallic zinc. Its formula is C_3H_6 . The gas liquifies at seventy-five pounds pressure at a temperature of 70 degrees Fahrenheit. It is about one and one-half times as heavy as air, having a density of 1.46 and a molecular weight of 42.95. It is inflammable when mixed with air in percentages of 3.0 to 8.5 or with oxygen in concentration of 2.5 to 50.0 per cent².

The administration is begun with a rapid flow of oxygen (6-8 liters per minute) as the mask is placed on the patient's face. Helium, which is readily diffusible, is added at approximately one liter per minute. The patient is allowed to breath this mixture for eight or ten minutes in an attempt to supply adequate oxygen tension in the alveolar air and thus overcome the threat of asphyxiation provoked by the narrowed bronchi and bronchioles that exists in these cases in varying degrees. Cyclopropane is then added at the rate of 300 cc to 500 cc per minute at intervals until the patient is completely relaxed and breathing freely.

To date, our series consists of twenty asthmatic and four hay fever patients ranging from three years to sixty years of age. In two of the recent cases, it is yet too early to tabulate the results. Two were morphine addicts, in which we obtained no results. One developed a ventricular fibrillation during the induction. Excluding these three cases we have obtained excellent results. We have obtained relief over

a period of from six to sixteen months before recurrences occurred. All of these cases were induced during attacks and some were relieved from all their symptoms immediately upon reacting from the anaesthesia. All the acute distress was relieved upon regaining consciousness. Those cases in which total relief was obtained cleared in from ten to fourteen days. After the 14th day, the typical chronic wheezing disappeared. During the first two weeks, one or more acute paroxysms may occur. There is considerable coughing for 10 to 14 days. The patient expectorates a large amount of greenish-brown sputum. This bringing of sputum is assisted by postural drainage twice daily, and at times a mild expectorant cough mixture is administered. Small doses of tincture of belladonna or soda bicarbonate twice daily, during this interval of 10 to 14 days was administered apparently with beneficial affect. As has been stated, we have made no attempt to classify the patient before treatment, no skin tests have been made. However, we do a thorough physical examination.

One patient, a child three years old, was apparently sensitive to everything. The parents had placed her on an eliminating diet, removed the cats, dogs, mattresses, pillows and so forth from the home and finally took the child to another house with no results. After receiving the cyclopropane which was administered the first time for 15 minutes, she was relieved of asthma within seven days. The anorexia disappeared and she immediately began gaining weight. At the end of the first month the patient was taken to her home with the same furniture, mattresses, and pillows and so remained relieved for a period of exactly six months. She then had another acute paroxysm, and all her symptoms recurred including her anorexia. At the end of two weeks she was given cyclopropane again and this time was anaesthetized for a period of thirty minutes. After the patient reacted from the anaesthesia, she, within two hours, ate a large lunch and in the evening a large dinner. After ten days, during which time she had one acute paroxysm, the chronic wheezing disappeared and apparently has been completely well since.

Another case, a male, aged sixty, developed

a ventricular fibrillation before he had been completely relaxed. The anaesthesia was discontinued immediately and oxygen administered and the fibrillation was arrested. This patient had had a persistent attack of asthma for a period of three weeks or more and was taking adrenalin in oil four or five times in twenty-four hours, and was also using an adrenalin spray at frequent intervals. Upon investigating it was found that "cyclopropane so sensitized a heart that the administration of a small amount of epinephrine may throw it into a ventricular fibrillation."³ Since this time, we have attempted to make certain that a patient has had no adrenalin for at least 72 hours preceding this treatment and thus far we have had no difficulty and have not had to stop the anaesthesia.

Early in this series, we used as routine morphine sulphate and atropine sulphate 45 minutes before treatment. Occasionally, particularly in young people, this was not administered and we noted that they took a better anaesthesia. Investigations show that large injections (in the case of the normal cat) "lead to very considerable constriction of the bronchial muscle after an initial transitory small dilatation, and this after the vagi are out."⁴ It is known that morphine sulphate depresses the respiratory system and cough reflex and occasionally patients are sensitive to this drug. We have now discontinued the use of morphine sulphate and atropine sulphate, prior to the administration of the anaesthesia.

In all of the cases a complete physical, a vital capacity and differential blood smear was made upon admission to the hospital. In every case the vital capacity was diminished from one-third to two-thirds of the normal and there was an eosinophilia present in all cases. Regardless of the rales and wheezes present upon auscultation of the chest immediately prior to the treatment, mid-way during the anaesthesia or at the depth of the anaesthesia the lungs are perfectly clear and no rales or wheezes are heard.

Generally when death occurs in allergic asthma, it is due to obstruction of the bronchi by thick tenacious mucous that is formed during the course of an attack. Occasionally death

is due to edema of the alveolar spaces.⁵ Helium, which is also used along with cyclopropane is a very diffusible gas and may account for the complete displacement of the residual air in these alveoli, which are possibly filled with harmful inhaled antigens and mucous plugs. The replacement with cyclopropane and oxygen may be in part the source of relief.

When no relief is obtained from adrenalin, there are numerous procedures which may interrupt an attack such as, hypertonic dextrose solution intravenously, ether in oil or avertin rectally, ether inhalation anaesthesia, various barbiturates intravenously or with lipiodal intrabronchially. The inhalation of cyclopropane and helium makes possible a more normal velocity of gas movement with diminished response effort in the sensation of dyspnea in asthmatic patients. Cyclopropane induction is performed much more rapidly and with less irritation to the respiratory tract than with ether. It induces rapid anaesthesia so that the patient's cardiac reserve is not further imposed on by a stage of excitement.

Status Asthmaticus or "asthmatic crisis" characterized by severe collapse with constant and extreme dyspnea to the point of exhaustion respond readily, at least temporarily. But, if the patient has had adrenalin, this makes the administration extremely dangerous.

Occasionally in an alcoholic, it is necessary first to induce the patient with ether and then switch over to cyclopropane. This procedure has been used with success. This method was used April 27, 1940, on a patient who had chronic wheezing with an occasionally acute paroxysm over a period of months. On the first attempt it was impossible to relax the patient and it was necessary to make another attempt (April 27, 1940) after which we obtained good results.

The economic condition of the majority of asthmatic patients precludes any protracted hospitalization. This, in itself, makes it most difficult to study these patients closely after treatment and thus come to any definite conclusions as to what actually takes place.

Thus far, there have been only four cases of hay-fever treated with this method. Two were operative cases but cyclopropane was used

specifically for the purpose of watching the results of the hay fever. It has been more than eleven months and neither of the patients has had a recurrence.

SUMMARY

(1) In this series of twenty asthmatic patients with two unclassified, we obtained relief varying from six to sixteen months in sixteen, and the four patients with hay fever have not had a recurrence.

(2) It has been used by us in hay fever as well as asthma with beneficial results.

(3) Cyclopropane is not without danger. However, we used it in more than one-hundred routine surgical cases without tragedies.

(4) The use of adrenalin, within 24 hours prior to administering of the gas, adds to the risk.

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Intestinal Infestations

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Among the more constant types of cases presented for medical attention are those of patients with chronic diarrhea, patients with intermittent diarrhea and constipation, and of patients with indefinite gastro-intestinal symptoms for which no cause can be found.

The laboratory and roentgenologic findings in these cases show no regular pattern. The gastric analysis may show an increase or a decrease in gastric acidity, and occasionally a case is found with no free hydrochloric acid. The administration of alkalis or of dilute hydrochloric acid does not relieve the symptoms. Examination of cold stools and of warm stools voided in the laboratory has usually been of no assistance, in our hands, in diagnosis and treatment.

Roentgenologic examination of the gastro-intestinal tract reveals no specific disease and no characteristic findings. Some may show a spastic condition of the prepyloric area of the stomach and of the duodenal cap, or a spasm of the entire duodenum; others, spastic areas in the colon; still others, spastic conditions in all three sections. In a few patients, there is a marked irritability of the entire gastro-intestinal tract, accompanied by an increase in peristalsis, so that the barium travels from the mouth to the anus in three to six hours. On the other hand, with some patients the roentgenologic examination reveals nothing which may be termed abnormal or unusual. In the patients with the spastic areas, atropine and

other antispasmodics do not give definite relief of symptoms.

In the first sixteen years of our private practice, from shortly after the war to four years ago, there were diagnosed in our office 32 cases of intestinal infestation, as follows:

Endameba histolytica 11.
Giardia lamblia 4.
Trichomonas hominis 4.
Necatur americanus 5.
Taenia saginata 3.
Strongyloides intestinalis 3.
Oxyuris vermicularis 2.

During this same period there were 49 cases of enterocolitis with either a chronic diarrhea or with an intermittent diarrhea and constipation for which no cause was found. Undoubtedly there went undiagnosed a number of other cases with gastro intestinal symptoms indefinite and inconsiderable in comparison with the patients' major complaints.

The specimens handled in the laboratory in those years were routinely either cold stools or warm stools passed either in the laboratory or at home and kept warm during transportation.

Four years ago we changed the technique of specimen collection, and our present practice is to have the patients suffering from the above-described symptoms to bring in one stool for routine examination, and then to take a saline laxative while in the office. The laxative is most effective when administered on an empty

stomach, and followed by a normal meal. The resultant stools are collected in the office, usually four to six specimens.

The identification of these various parasites will not be discussed in this paper, since we have nothing to add to the discussions to be found in the various textbooks on the subject.

During these four years we have found 42 cases of intestinal infestation, as follows:

Endameba histolytica 5.

Endameba histolytica with *Giardia lamblia* 1.

Endameba histolytica with *Trichomonas hominis* 2.

Giardia lamblia 13.

Trichomonas hominis 13.

Giardia lamblia with *Trichomonas hominis* 1.

Chilomastix mesnili 4.

Strongyloides intestinalis 1.

Oxyuris vermicularis 2.

In this latter period there have been examined only three cases with a chronic diarrhea in which we were unable to demonstrate some form of infestation, as compared with 49 cases before we began the examination of multiple stools after saline laxative.

Of the 42 patients with infestation as listed, 16 were males and 26 females. All were white. Social and economic status appeared to hold no significance: There were included doctors, doctors' wives, preachers, teachers, librarians, nurses, students, salesmen, housewives, beauticians, office workers, textile engineers, farmers, merchants, business executives. The age range was from 8 years to nearly 70.

The symptoms manifested by these patients may be classified as (1) gastro-intestinal, (2) nervous and emotional, and (3) general.

The gastro-intestinal symptoms were, in order of frequency:

Constipation, vague indigestion, gas, diarrhea, diarrhea alternating with constipation, fulness and pressure, "heart-burn," nausea, nausea and vomiting, anorexia, vague abdominal pains, cramps, attacks of acute abdominal pain, and hematemesis.

From a nervous and emotional standpoint, many of these patients suffered from a definite neurosis. They complained of nervousness, insomnia, the sighing type of respiration with shortness of breath, depression, uneasy feeling

about the heart with palpitation. One young man had hot flashes and a burning sensation over his legs, and another had numbness of his legs. Four patients complained of frequency of urination and discomfort in the bladder. Three had disturbances of vision.

From a general standpoint, there were malaise, loss of weight, headaches, vertigo, intermittent fever, muscular aching, and arthritic pains. A large percentage of them complained of recurring attacks of herpes labialis and mouth ulcers, one or both together.

Since a considerable number of our patients come to us originally for an allergic survey, the fact that 19 of these 42 patients suffered from some form of major allergy is interesting but of questionable significance. The allergic manifestations included urticaria (8), allergic coryza (8), gastro-intestinal allergy (5), angioneurotic edema (5), asthma (4), migraine (2), allergic joints (1), and cerebral allergy (1).

While we examine stools routinely in our allergic cases, we give the saline laxative for warm-stool collection only in the presence of definite clinical indications for such examination.

Several years ago, Dr. G. W. Owen,¹ of Jackson, Mississippi, advanced the theory that intestinal infestations were responsible for much food allergy. His idea was that the parasites produce a chronic inflammation of the intestinal tract which permitted food to be absorbed in an unchanged state, thereby producing a sensitization to such food.

We were permitted some time ago to see a laboratory demonstration of the work of Dr. Bronfenbrenner,² of the University of St. Louis, which lends some weight to this intestinal inflammation theory. Dr. Bronfenbrenner produced scurvy in guinea pigs by feeding them a diet free or nearly free from vitamin C, following which he fed them egg-white by mouth, and three weeks later he was able to demonstrate marked sensitivity to the egg-white. When some pigs left in the state of scurvy were fed egg-white again after the demonstration of sensitization, they evidenced symptoms of acute anaphylactic shock and died. The pig would first become uneasy, then scratch

his nose, then cough, double up with cramps, pass bloody mucus from an anus and finally die. The pigs which were given egg-white in the state of scurvy but were allowed to recover from the scurvy showed milder symptoms after being fed egg-white, after the three-week interval, but did not die.

Most of our 42 patients had had much other treatment before coming to us. Eight had been operated on for chronic appendicitis and two others had had exploratory laparotomies for possible gall bladder disease. None of the ten operated on had been relieved of their symptoms by the operations.

Some years ago, in reviewing the literature on the diagnosis and treatment of amebic infestations of the colon, we were greatly impressed by the preponderance of reports by the British, who seemed to have had more experience in treating intestinal infestations than any other one group.

About the same time we discussed the treatment with Dr. Trimble Johnson, of Atlanta. Dr. Johnson³ stated that amebic infestation of the colon will be cured by using some bismuth product to constipate the patient and then giving the patient *alcresta ipecac*, 10 grains four times a day. He starts the patient on a slightly heaping teaspoonful of bismuth subnitrate three times a day, and increases this dose by one teaspoonful each day until the patient is constipated. That is, the first day's dose is one teaspoonful three times a day, the second day's is two teaspoonfuls three times a day, and so on. If it seems impossible to constipate the patient by bismuth alone, he suggests the addition of one dram of tannigen to each ounce of bismuth subnitrate.

If possible, the patient is kept in just a slightly constipated state. If the bismuth constipates too much, Dr. Johnson administers a good big dose of castor oil, and then starts over again. He advises against the use of emetine, as a rule.

It happened that when we first began to see cases of amebic infestation we had to treat several patients who had been treated off and on for months or years without response, so we began to use a combination of Dr. Johnson's treatment and what the British recommended.

For uncomplicated cases our present method is as follows:

1. In cases with acute diarrhea, we give a course of emetine using $1\frac{1}{2}$ grain to $3\frac{3}{4}$ grain every day or every second day for twelve doses, provided there is not too much local reaction, no signs of beginning neuritis nor of myocardial weakness.

2. Bismuth subnitrate is given every day for one month in quantities sufficient to constipate; tannigen, if necessary.

3. *Alcresta ipecac*, 10 grains four times a day, is given for one month.

4. During this same time, after the administration of the emetine is finished, we give a course of neo-arsphenamin, 0.3 gram to 0.45 gram every five days for four to six doses.

5. After the course of arsenic, bismuth and *ipecac* is finished, fifty doses of emetine bismuth iodide are given, one dose three times a day.

6. Following this, a course of one of the other preparations commonly used, such as chiniofon, carbarsone, vioform or diodoquin, is given for two weeks. We recommend vioform, grains 6 to 10 three times a day.

7. Following the vioform, fifty more doses of the emetine bismuth iodide are given.

8. The patient is allowed to rest for one month, and then requested to come back to the office for another saline laxative and examination of six stools.

This treatment is usually efficacious also for *Trichomonas* and *Chilomastix*, but for infestation of these parasites alone we use mostly vioform or diodoquin. There is also recommended a colon irrigation of 1:5000 copper sulphate at a temperature of 43° C. to 45° C.

For the *Strongyloides intestinalis* the simplest treatment which seems to be efficacious in most instances is enteric-coated pills of gentian violet, $2\frac{1}{2}$ grains, one pill three times a day before meals for two or three weeks.

Our treatment for round-worms, pin-worms, tapeworms and hookworms has been conventional and almost always successful.

Judging from the literature and my own short experience, the most difficult parasite to get rid of is the *Giardia lamblia*. We have discarded all other treatments for the one recom-

mended by Dr. Horace Soper, of St. Louis, which is as follows:

For a 150-pound patient Dr. Soper recommends:

1. A light evening meal.
2. Five grains of calomel at bedtime.
3. One ounce of Pluto water with one ounce of water early the next morning.
4. No breakfast except a glass of water or weak tea.
5. Neo-arsphenamine, 0.45 gram.
6. Light lunch and supper.
7. Next morning give a light breakfast or none at all.
8. Neo-arsphenamine, 0.6 gram.

This treatment makes most people rather sick, but it is not unbearable and seems to be efficacious with the first treatment in more than fifty per cent of cases of *Giardia lamblia*. We have had, however, two cases which still showed the presence of *Giardia* in the stool following two courses of such treatment.

In cases of chronic diarrhea or dysentery and in cases of intermittent diarrhea and constipation for which no cause can be demonstrated, we give the treatment for amebic infestation as outlined above, and in all but three cases of diarrhea and dysentery the symptoms have been relieved. We believe that this is a justifiable treatment under such circumstances.

Invitations have been received to the annual celebration of Founder's Day at the Medical College of the State of South Carolina November 6th, 1941. The program calls for clinics during the morning, a pathological conference during the afternoon and a banquet during the evening at which the

SUMMARY

1. It seems not only possible but probable that a fair percentage of our local population is suffering from some form of intestinal infestation.⁵

2. Symptoms are variable but may be gastro-intestinal or neurotic in type or general over the body.

3. It seems wise to suspect intestinal parasites as a possible cause of symptoms not otherwise explained.

4. In suspected cases, diagnosis seems best obtained by examining one or more stools voided in the usual manner and at least six stools voided in the office following a saline laxative.

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main address of the day is to be delivered by Dr. R. A. Ross, Associate Professor of Obstetrics and Gynecology, Duke University School of Medicine. His subject: **Medical Organizations and Education in a Neighboring State.**

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The Practical Management of Infantile Eczema*

LEON S. BRYAN, M.D.

COLUMBIA, S. C.

The term "eczema" was formerly used as a scrap heap into which were thrown all of the inflammatory skin conditions accompanied by exudation. It was not until thirty years ago that we began to know something about allergy, and it was not until about twenty years ago that we began to know something about fungi as a cause of skin diseases. Since these two discoveries the eczema group has been classified according to etiology as follows:

1. Dermatitis Venenata, which is produced by an allergen coming in contact with the skin. The individual has to have been previously sensitized before he can develop it. Poison ivy dermatitis and house-wife eczema of the hands are good examples.

2. Seborrheic Eczema, which is an exudative inflammation due to the same germ that causes dandruff and has a predilection for the scalp, ears, center of face, chest, back and groin.

3. Hemostatic Dermatitis, as the name implies, is due to poor circulation and occurs usually on the lower half of the legs of the elderly, or people with an obstruction to circulation such as varicose veins. This condition usually precedes and accompanies hemostatic ulcers.

4. Infectious Eczematoid Dermatitis is the type of eruption originating from an area bathed more or less constantly in pus, such as the ear and neck in cases of chronic otitis media, and around the borders of a draining sinus such as a boil or infected surgical incision. The person becomes sensitized to the bacterial products; there is peripheral extension, and distant areas may become involved either by mechanical or hematogeneous dissemination of the toxins.

5. Dermatophytosis is the term used to denote an eczematous response to the products of fungi. We now recognize sixteen varieties

of pathogenic fungi and some of the eruptions caused by the different species are quite characteristic.

6. The sixth type, and the one which is most common in children, is Atopic Dermatitis. By Atopic we mean the condition is familial and is due to allergy; and by allergy we mean a specific alteration in the capacity to react to an endogeneous or exogenous substance. Atopic Dermatitis runs a fairly characteristic course. First, the individual has a variable amount of eczema when a baby or small child, and as he grows older he usually outgrows his eczema and is a likely candidate for other allergic manifestations such as urticaria, hay fever, asthma, migraine, intestinal allergy, etc. It is said that any organ in the body may be affected.

But in the infant, and by infant I mean a child from birth to the age of two years, the skin bears the brunt of the attack. It is rather unusual to see allergic manifestations involving any other organ in infancy, though it does occur infrequently. About 80% of cases of infantile eczema belong to this group.

The causative agent is usually one or more articles of food, and, in the order of frequency, the most common ones are milk, eggs, oranges, wheat, tomatoes, and oats. Less frequently is it due to the inhalants such as feathers, house dust, hair of various kinds, and silk.

It occurs most often in fat, overweight, otherwise healthy infants. The first sign of the eruption usually appears during the first six months of life and consists of a papular or papulo-vesicular eruption on the cheeks which tends to spread later to other parts of the body, chiefly to the scalp, cubital and popliteal spaces, the wrists, and lower part of the legs. At times it becomes generalized.

The individual lesion begins as a small area of inflammation which soon becomes edematous, then vesicular. When the vesicle ruptures serum exudes, forming a crust. It is never

*Read before the Seventh District Medical Association, Georgetown, S. C., September 11, 1941.

pustular unless secondarily infected. When resolution sets in it stops oozing and becomes scaly, then gradually the skin returns to normal. It may abort at any of these stages. That is, it may abort at the erythema stage and return to normal or it may abort at the edematous stage and never produce a vesicle. If it becomes infected there may be a tremendous enlargement of the regional lymph nodes.

The only constant change in the blood picture is an eosinophilia of about 5 to 15%.

The management of cases of infantile eczema may logically be divided into etiologic and symptomatic treatment.

Etiologic treatment is aimed at removing all probable causes of the baby's trouble from his diet and from his environment. If possible it is best to put him in a room from which all carpets, curtains and upholstered furniture have been removed. Wooden or steel furniture, cotton mattress, cotton pillow, and white cotton clothing and bed clothing should be used. Furniture, walls, and floors should be wiped with a damp cloth often enough to keep them free of dust. When clothing and bed linen are washed they should be thoroughly rinsed so as to remove all traces of soap. Whether soap is the cause of the eruption or not it will make it worse. Diapers should be soft and loosely applied. Rubber pants should not be worn. The baby will get along better if kept in bed. Fingernails should be cut as short as possible as the more the eruption is scratched the more it itches. To prevent scratching cardboard armlets may be tied around the arms, or, if necessary the hands should be tied to the side of the bed. The baby must be made to stop scratching. Sedatives such as phenobarbital or chloral hydrate are often of great value.

The baby should be cleansed as a newborn is cleansed, with olive oil, sulfonated oil or mineral oil.

Diet regulation is of primary importance. Close observation of the effects of the withdrawal of, and re-exposure to, various foods proves more successful in determining the etiology of this type of eczema than do skin tests. Skin tests in children under two are unreliable.

It is best to start the baby off by eliminating everything except the milk he is already taking. If he is sensitive to this milk, goat's milk is tried, and if he is sensitive to goat's milk switch to a soy bean milk such as Sobee or Mulsoy. In children over 7 months of age rice can be safely added as it is rarely an offender. After a milk has been found that agrees with the baby one article of food is added every four to seven days. If he has a flare up the last food added is withdrawn for several days, then added again. If a second flare up occurs that food is withdrawn for one year, at the end of which time the baby will probably no longer be sensitive to it.

The necessity of vitamins and calcium should always be kept in mind when these are restricted in the diet.

The local treatment of these patients is extremely important, and I want to stress the fact that it must be varied with the character of the lesions.

Here is a brief outline of the topical remedies for use in each of the various stages. We will begin with a severe case with vesiculation, oozing, crusting and secondary infection. In this type of case begin with wet dressings of one part Burows Solution in thirty parts of two percent Boric acid solution. The dressings should be only three or four layers of gauze thick, and the solution should be applied at room temperature. When the infection is controlled switch to One-Two-Three ointment, which is Burows Solution one part, Anhydrous Lanolin two parts, and Lassar's Paste three parts. When the exudation has practically stopped change to plain Lassar's Paste (N. F.) without Salicylic Acid. This should be applied heavily and bandaged. When it improves to the stage where there is only erythema and scaling mild tars are indicated. Five percent crude coal tar in Lassar's Paste or White's Ointment (N. F.) are very good but are messy unless covered with a bandage. White's Ointment is:

Crude coal tar	2	} Mix) Mix	
Zinc Oxide	2			
Corn Starch	16	} Mix		
Petrolatum	16			

Naftalan, Naftex and Dernaftan are good, mild tars which do not stain and are all used in three to ten percent strength.

If the skin remains somewhat thickened and scaly as it is apt to do, especially in older children, use a more penetrating tar such as five percent crude coal tar in half and half lanolin and vaseline.

In mild cases where there is severe pruritis but no vesiculation or exudation it is well to use an emulsion in the daytime, such as Calamine emulsion N. F. to which may be added one-tenth to one quarter percent menthol and one quarter to one half percent phenol. A soothing ointment is used at night. An example of the latter is cold cream containing thirty

grains of Zinc Stearate to the ounce.

In the very mildest cases where there is only a little erythema and edema the following is good:

Rx	Oleated Mercury	-----	1 to 2%
	Resorcin	-----	2%
	Liquor Carbonis Detergens	-----	2%
	Vanishing Cream	-----	qs.

This should be rubbed in well three or four times a day. The best of the proprietary preparations for such a case is Mazon Ointment.

There is one more point I want to mention. If there are any symptoms of a thyroid deficiency thyroid extract will often be of great value.

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Subscription Price

Florence, S. C.
\$3.00 per Year

NOVEMBER, 1941

SLACKERS OR PATRIOTS

In the September, 1941, issue of Southwestern Medicine appears an editorial entitled One Clear Call, and the first two paragraphs read as follows:

"Much concern has been expressed regarding the response of a portion of the medical profession to the need for physicians in the armed services. Many of the younger doctors have refused to accept duty with the army or navy, adopting varied reasoning and excuses for their actions. Prominent among the statements made by some is that 'I would go in a minute if we were in war.' Of course, if enough go now and assist in demonstrating to the jackals of the world that Uncle Sam has a good strong right arm ready and tough, we may have no war. If war can be prevented in this manner from touching America, surely those men who serve now in the grand program of preparedness and training are even more entitled to the designation 'hero' than those who jump in when the fire has started. It is easy to give service to one's country when the cannon roars and personal fears and emotions are aroused. It is more difficult to arrive at decisions involving such intangibles as loyalty, patriotism, self-abnegation and personal sacrifice when no bombs are falling into one's own backyard. Yet, of such intangibles were the tough, fine men of a former day in America made. Such qualities are expected of physicians, of all men. If they be not present in that body of citizens, surely the

splendid ideals of service we have long advocated must then have been mere mouthings of egotists.

"Deplorable is the descent of the physician into the market-place, setting a price on his services and haggling over dollars and goods like a common fish-wife. Some of our brothers cry for their palms to be crossed with silver for their services in examining draftees. Others tell of how much more money they can make at home in comparison to their salary as an officer in the service of their country. By these short comings the medical men of America are now being judged by their fellows—make no mistake about that! If there be one who doubts that, or who is serenely confident of his halo, let him but put his ear to the ground and listen, like he never has before in his life. Let him put away the nostalgic wishes for the good old yesterdays, and listen and heed. Let him answer the call of need of his land. Let him in so doing repay a part of the debt he owes that land for his education, his heritage of freedom, his very life."

Today sentiments such as these appear as slight whisperings in the trees but by tomorrow they may become a roaring wind.

That younger physicians are not volunteering in large numbers for service in the armed forces is a fact which anyone who has made the most cursory of studies will recognize. But is this due to a lack of patriotism, as the quotation above suggests? Are our younger

physicians less willing to serve their country today than they have been in the past? We answer with a resounding, No. We do not believe that our younger physicians are any less loyal to the United States today than they were twenty or forty or eighty years ago and we are glad to raise our voice in their defense.

Why do not our younger physicians rush forward and volunteer their services for military duty at the present time? It seems to us that there are three definite and logical reasons for their action.

In the first place they do not feel that the army needs them now. They have talked with many medical officers and have received the same type of information which we have received in private conversation and which can be exemplified by the following statement, lifted from a talk with a young lieutenant in the medical corps. "The biggest drawback to our work in the army is that we have so little to do. There are five doctors in my outfit and none of us are kept busy with medical work and the only time we are forced to expend much effort is in doing 'paper work.' Several months ago my four colleagues were sent away for special training and I had all the medical work in our outfit to do, and those were the happiest days of my military service. Of course, if we go to war they will probably keep us busy but at present we spend a large part of our waking hours whiling away the time. Any of us could do two or three times as much medical work as we are now doing and still not be as busy as we were in private practice."

When a young physician with an active practice hears statements such as this there is naturally no incentive for him to give up his work to join the group of those who have so little to do. From information which he has at hand, he does not see any crying need for his medical services in the army at the present time and it is only natural that he should refrain from volunteering. Should war come and should he feel that his services could be used to advantage, he will not hesitate to volunteer.

Secondly, the young physicians do not believe that they need the same amount of training for military service as do the draftees.

Four years in medical school, one to three years in internship and several years of practice have taught them the essentials of medical practice. They feel that their greatest service to their country can be rendered through the medical education which they have already received. They realize a certain amount of military training is necessary to acquaint them with the general routine of a military organization and this they are willing to undergo, but they do not see the rationale of spending twelve to eighteen months in the army to prepare for medical service. A limited and intensive course in special phases of military medicine would give all the special work they need and this they would accept but they can see no reason for the volunteering of services for a longer period of time unless the emergency is upon us.

Lastly, the younger physicians, at least those in this section of the country, feel that they are serving the public in their present locations, and by serving the public they are serving their country. Many of these younger physicians are vital medical factors in their given communities and there is no one to take their places should they volunteer. They are willing to serve their country wherever the need is greatest but they are not yet convinced that the need in the army at the present time is greater than the need at home. There has been no general call for physicians to volunteer for the army. Appeals have been made indirectly through various army medical officers but no challenging statement has been issued from the President, from the Secretary of War, or from the Surgeon-General of the Army. Should such a call be issued there is no doubt in our mind that the young physicians of the country would respond with enthusiasm, but until they are convinced that they can render a greater service to the country through military service than they can by staying at home and taking care of the people now in their charges, they are not ready to volunteer.

Undoubtedly there are in the medical profession, as there are in any group of professional or business men, those who base their decisions entirely upon selfish reasons—but we do not feel that such are in the majority. We

believe that the three reasons given above are the main reasons why the younger physicians are not volunteering for military service today. After all, is it any less patriotic for a physician to stay at home and to be on call for twenty-four hours out of twenty-four, serving the public at large, than it is to join the

army as a medical officer and there spend much of one's time doing little in the line of treating the sick? We do not believe that it is, and we again reaffirm our faith in the patriotism and the loyalty of the young physicians of today.

The great single drawback to football is the toll of injuries which follows in its wake. Probably the most frequent injury encountered is the *football knee*. Dr. J. H. Boland presents the following discussion in the January, 1941 issue of the Journal of the Medical Association of Georgia and it should be of interest to all physicians who are in any way connected with football players.

"It wasn't so very long ago that when a player received a football knee he was considered out of football and other athletics forever. It was even considered that the boy had been made a cripple and semi-invalid for life by the game. However, parents, players and coaches have learned that with proper treatment a boy can be made fit again for football and other athletics, and even if the boy decides or is persuaded to give up strenuous athletics he does not have to go through life crippled with a football knee.

"The diagnosis of a football knee is at times difficult and unless the diagnosis is fairly certain too much cannot be promised as in any other medical or surgical condition. The treatment is either conservative or surgical. The important part of the conservative treatment is a long period of rest. This does not mean a few weeks rest from scrimmage with daily laps around the field and other exercise to keep in condition for a game a few weeks off. It means absolute rest which usually requires a plaster cast and crutches, for one to two months. This is followed by physiotherapy to restore motion and the tone and strength of the surrounding muscles and ligaments. The conditions which may be cured by conservative treatment are principally partially torn lateral and cruciate ligaments, chronic traumatic synovitis and bursitis, fibrosis from bad bruises in the surrounding ligament or ligaments, and Osgood-Schlatter's disease found occasionally in the younger players. At times surgery is indicated in these conditions.

"A torn or dislocated internal semilunar cartilage is the condition most often requiring surgery for cure of a football knee. Other conditions diagnosed in football knees requiring surgery are loose osteo-cartilaginous bodies, badly torn lateral or cruciate ligaments, fractures of the tibial spines, recurrent dislocation of the patella, and damage to the external semilunar cartilage. Immediately following the initial injury a definite diagnosis is made very

easily or not at all. That is, the exact condition is very obvious or it will be masked by the pain, swelling, and muscle spasm. Conservative treatment is always indicated at this time except for one condition. This is with a locking of the joint which cannot be loosened by manipulation. Often the boys appear for examination and diagnosis when all symptoms have subsided and very few significant signs are present. If the X-ray films are negative, which is the usual case, the diagnosis is difficult but can be made with a very careful history and examinations repeated on one or two different occasions.

"While the chronic joint does not require operation as soon as the diagnosis is made it is advisable that operation not be deferred too long because with recurring intraarticular irritation a chronic synovitis or osteoarthritis is set up. Also it is to be remembered that the sooner the operation the sooner the player will be ready for play.

"Following surgery is the time that the trainers play a very important part in the treatment. An attempt should be made with physiotherapy to gain motion and function progressively but gradually. This is especially true in the first six weeks after operation. If the treatment is applied too vigorously a longer period will be required to obtain the final result than if no physiotherapy had been used at all except by the boy himself."

Mayor F. H. LaGuardia, Director of the Office of Civilian Defense, today announced the appointment of Miss Marian G. Randall as Nursing Consultant in the Medical Division of the Office of Civilian Defense.

Miss Randall is on leave of absence from the Henry Street Visiting Nurse Service, New York City, where she is Assistant Director.

For eight years a member of the Research Staff of the Milbank Memorial Fund of New York City, Miss Randall conducted studies of public health nursing as related to administrative practices. A series of these studies has been published in pamphlet form.

PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

THE PROBLEM OF VITAMIN D

Roe E. Remington, Ph.D., D.Sc.

Professor of Nutrition

Medical College of the State of South Carolina

Specifically vitamin D increases the absorption of calcium and phosphorus from the intestines. Together with the parathyroid hormone, blood phosphatase, and other factors, it regulates the metabolism of these elements in the body. By maintaining a sufficiently high concentration of calcium and phosphate ions in the blood, it promotes growth of bones and teeth. For the growth of the skeleton in infants and children, and very probably for its maintenance in older persons, there is required not only an adequate supply of the vitamin, but also adequate intakes of calcium and phosphorus in a ratio of between one and two parts of calcium to one of phosphorus. Deficiency or excess of calcium beyond these limits upsets the equilibrium between these ions in the blood, and makes the deposition of calcium phosphate in bones more difficult.

Since foods that are well supplied with vitamin D are not numerous, the providing of an adequate supply of it through food alone to the fetus (through the placenta), and the infant, present perhaps the most difficult problem in vitamin nutrition. Before birth adequate calcium and phosphorus are provided by the mother, even at the expense of her own body, and after birth these elements are found in satisfactory amount and good proportions in milk. The action of sunlight (and ultra-violet light) on the skin is an important source of vitamin D. However, on account of differences in the ultra-violet intensity of sunlight at different seasons and in different latitudes, and the differing degrees of obstruction presented by pigmentation in the skin of different individuals, it is difficult if not impossible to evaluate the amount of vitamin D produced in this way.

It is now routine to give the vitamin in the form of fish liver oils or their concentrates, or solutions of irradiated ergosterol, to the mother during the later months of pregnancy, and to the child during its first year of life. Fish liver oils and irradiated sterols have not been available to all peoples throughout all times, hence protection must have been afforded by sunlight, aided by the rather small and decidedly variable amount contained in natural unfortified foods. That people have gotten along as well as they have through the ages is perhaps the best testimonial to the value of sunlight.

Our ideas as to the quantitative vitamin D requirement have been constantly revised upward during the past few years. Starting with an amount which would prevent definite symptoms of rickets (originally believed to be 100 to 125 International or U. S. P. units per day), we have added the concept that optimal growth requires considerably more than simple protection against rachitic signs, up to 300 units per day. Early this year the Committee on Foods and Nutrition of the National Research Council has set 400-800 units as the requirement for the latter half of the period of gestation and during lactation in women, and for the first year of life for the child. During later childhood and throughout adult life it should probably be supplied in about the same amount if not furnished by exposure to sunlight.

The addition of vitamin D to milk (which already contains the needed calcium and phosphorus) by one means or another, was a great step forward. However, in view of our present ideas as to daily requirement, some forms of vitamin D milk may fall short. Irradiated vitamin D milk was originally standardized at 135 units per quart, and there are difficulties in increasing this amount. Addition of vitamin concentrates to milk can, of course, be done in any amount. Such "fortified" milk, formerly standardized at 300 units per quart,

is now obtainable from some dairies at 400 units. Irradiation of the cows, or feeding of irradiated yeast to cows, increases the vitamin D content of the milk, but cannot be as readily controlled as the other methods.

After the first year of life the problem is apt to be complicated by that of providing enough calcium. A diet mainly of cereal grains, or cereals and meat, without milk or with a minimal amount of milk, will fail with respect to calcium. Most nutritionists recommend at least a pint of milk per day for adults and children alike.

The cost of providing infants with the necessary vitamin D is receiving attention from the Committee on Nutritional Problems of the American Public Health Association (of which the writer is a member). If the entire 800 units is provided from pharmaceutical sources, it is possible for the cost to run as high as seven

cents a day or more. Add to this the cost of the necessary fruit and vegetable juices to provide ascorbic acid, and it is easily possible to spend half of the baby's food allowance for these two items. This problem is particularly vital in families of low income, or on relief. In one city physician consultants were found to be recommending infant diets costing over thirty cents, whereas the family relief allotment was based on eighteen cents a day for the baby. The physician who is alert to the interests of his patients will rely so far as he can on vitamin D enriched whole or evaporated milk and on sunlight, using pharmaceuticals only to assure that the vitamin intake is held up to, but not wastefully above, the recommended level. Where cost is an item, he will inform himself as to those preparations which will provide the required unitage at a minimum price in his community.

For the local Treatment of Acute Anterior Urethritis

(DUE TO NEISSERIA GONORRHEAE)

SILVER PICRATE*
Wyeth

A complete technique of treatment and literature will be sent upon request

*Silver Picrate is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

Silver Picrate, Wyeth, has a convincing record of effectiveness as a local treatment for acute anterior urethritis caused by *Neisseria gonorrhoeae*.¹ An aqueous solution (0.5 percent) of silver picrate or water-soluble jelly (0.5 percent) are employed in the treatment.

1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph., Gon. & Ven. Dis.*, 23, 201 (March), 1939.

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PUBLIC HEALTH

PUBLIC HEALTH FOR THE WORKER

J. G. Townsend, Medical Director
U. S. Public Health Service

(Although South Carolina is primarily a rural state the number of industries within our borders is increasing rapidly and the problem of the industrial worker is one which is assuming paramount importance to the medical profession. This paper, which was presented at the South Carolina Public Health Association Meeting, May, 1941, at Myrtle Beach, is a study of industrial hygiene, and we are glad to present it to our readers.

The author has been connected with the United States Public Health Service since 1913 and is eminently qualified to discuss the subject.—Editor.)

The condition and life of the industrial worker has socially and historically been one of the primary problems of national health. The development of modern industry brought man into close contact with physical and chemical forces of tremendous potency, and affected the people's health not only directly through the process of production but also indirectly by creating certain living conditions. The protection of labor, the creation of sound living and working conditions of a clean and healthy factory environment are of primary importance in a highly differentiated, highly specialized industrial society which not only has no room for unnecessary illness but actually *requires* healthy members in order to function properly.

As the magnitude and complexity of the problems created by the development of industry have increased, certain social mechanisms have been evolved to alleviate or solve these problems. Thus, from the early concept of industrial hygiene as remedial action for accidental injury incurred in the course of one's occupation, we have progressed to the point where today the concept that the health of the industrial worker forms an integral and inseparable part of the health of the community finds wide acceptance. It is recognized today that industrial health is an important component of public health, and, as such, is much more than control of industrial accidents and

occupational diseases. The importance of accidents and occupational diseases should not be minimized, but emphasis should be placed on the application of preventive medicine to the groups of individuals who are to be found employed in all the various ramifications of industry if we are to bring to them the positive side of health—namely, increased vitality, capacity, and efficiency of the human body.

An analysis of the health problems affecting all wage earners and of the present day activities in the field of industrial hygiene will serve to indicate more clearly what may and should be accomplished in order to achieve this objective.

Scope of the Problem

Industrial hygiene may be defined as the science of the preservation of the health of workers. It therefore involves a program which necessarily extends beyond the prevention of accidents and occupational diseases to include the general health of the worker. It is obvious that some of the problems arise from the nature of the industrial environment itself—namely, the control of poisons, dusts, excessive temperatures and humidities, defective lighting, noise, over-crowding, and general plant sanitation. They also include such factors as hours of work, fatigue, communicable diseases in the factory, mental health, and personal hygiene.

Although in the past, industrial hygienists have concentrated their efforts on the control of certain health hazards in the manufacturing, mechanical, and mineral industries, it is well known that health problems worthy of attention also exist in other occupational pursuits. According to the last Federal Census, the total labor force of the United States is 52,000,000 persons. Obviously the health problems of a group which comprises such a large proportion of our total population are of tremendous importance to those persons and agencies concerned with public health in

general. Furthermore, when we realize that practically all the remaining population is dependent upon these 52,000,000 workers for their existence, and that the health of all may be affected by the health status of the gainful worker, then, indeed, industrial hygiene takes on an importance heretofore not recognized.

In order to plan and execute intelligently the necessary measures for the protection and improvement of the health of workers, it is necessary to evaluate the present health status of workers, that is, the incidence of industrial accidents and occupational diseases and the excessive frequency of other diseases in any occupational group. Such an evaluation shows that despite years of continued improvement in industrial hygiene, industrial accidents in the United States still cause 17,000 deaths, 75,000 permanent and 1,400,000 temporary disabilities, annually. Recent surveys of industrial plants throughout the Nation show that more than 1,000,000 persons are engaged in work where industrial dusts can create a serious health hazard under certain conditions, nearly 1,000,000 persons are handling lead and its compounds, and another 50,000 are using mercury and its compounds. In addition, many millions of workers are exposed to materials which may produce disabling skin diseases.

Of greatest significance, however, is the enormous waste of life and efficiency resulting from non-industrial illness among workers. As a matter of fact, the amount of time lost from work, because of ordinary illnesses, is 15 times as great as the total time lost due to accidents and occupational diseases combined. It has also been demonstrated that industrial workers have a higher rate of physical defects than do non-industrial workers, and that excessive mortality is especially notable among unskilled employees, whose death rate from all causes is 100 percent or more in excess of the rate among agricultural workers.

All of these facts have an important bearing on the industrial health problem, since an adult population is involved. The health problems peculiar to workers as a group may be effectively solved by the application of those public health methods which have operated so successfully in the control of specific ill-

nesses affecting other units of the population.

The Development of Industrial Hygiene

If we examine the early history of industrial medicine, we will find that the chief function of industrial medical departments was the treatment of traumatic injuries. Gradually, the work of the medical department began to extend beyond surgical treatment to the medical phases of the problem. Such functions as pre-employment and periodic physical examinations job placement, and, more recently, medical and engineering control of occupational diseases, began to take their rightful place in industry. Where, in the past, attention was given mainly to the improvement of machinery, recent activities have been directed to the economic waste resulting from failure to provide protection against controllable health hazards. One of the primary stimuli to the introduction of more adequate medical services in industry has been the passage of workman's compensation laws for accidents and occupational diseases. Today, all but one state have laws providing benefits in the event of accidental injury, and 24 of these states have enacted legislation compensating workers for one or more occupational diseases.

Responsibility for safeguarding the health of our workers rests chiefly with state and local government. The agencies of the Federal Government concerned with industrial hygiene are engaged primarily in the collection and dissemination of information, conducting field studies, laboratory research and protection of the health of Federal employees. Prior to 1936, most states dealt chiefly with matters of safety, sanitation, employment of women and children, and compensation of employees following accidents.

When funds were made available by the Social Security Act for the development and extension of all branches of public health work, the United States Public Health Service, in cooperation with the Conference of State and Provincial Health Authorities of North America, inaugurated a program designed for the purpose of establishing active industrial hygiene work in state and local health departments.

In the period elapsing since the passage of the Social Security Act, the development of industrial hygiene has been rapid; today, 32 states and several cities have industrial hygiene services. If our progress continues at the same pace, it may in time attain a level commensurate with its value to the national economy.

In spite of the great progress in industrial hygiene during the past few years, the results of a recent survey of some 17,000 establishments employing nearly 1,500,000 workers in 15 states clearly indicate the need for a more effective and adequate program in industrial hygiene. When we realize that only one-fourth of the workers in the plants surveyed had the services of a full time safety director, that only 15 percent were provided with a plant physician, and about one-third with a full time plant nurse, then we are brought face to face with the fact that our provisions for maintaining and improving the health of workers are far from adequate. In addition, this study clearly showed that measures for the control of many hazardous exposures are also limited. All of these findings indicate the need of concerted effort on the part of industry, governmental agencies, and others, for an effective program in industrial hygiene.

From all of the information presented thus far, it should be apparent that the protection and improvement of the health of our workers should be an integral and indispensable part of a public health program. Today there is sufficient knowledge concerning the effects of various toxic materials and environmental conditions on the health of the worker. Also, our information on methods for the control of the majority of the health hazards in industry has reached a stage where it may be successfully applied. It should be our aim, therefore, to close the gap between our knowledge of how to control and prevent industrial health hazards and the practical application of this knowledge. It is also evident that it will be necessary not only to control unhealthful conditions in the working environment, but also to give consideration to such factors as proper living conditions, elimination of strain and hurry, nutrition and communicable diseases; in fact, to a general adult health program for workers. A

broad industrial health program of this character, to progress satisfactorily, must be closely interwoven with existing public health activities and with the activities of many other official and nonofficial agencies concerned with the various aspects of industrial health.

A Program for an Official State Agency

Earlier in this discussion, it was shown that today there are 32 state health departments and several cities and Territories active in the field of industrial hygiene. In assisting the states in the development of their programs, the Public Health Service has advocated the following functions:

1. Consultation with plant management regarding needed corrections of environmental conditions.
2. Advice to the management and medical supervisor as to the relative toxicity of materials or processes, and advice concerning new materials prior to their introduction into the industry.
3. Assistance in developing, maintaining, and analyzing absenteeism records.
4. Consultant service to medical supervisors, private physicians, compensation authorities, and other State agencies regarding illness affecting workers.
5. Provision of necessary laboratory service of both a clinical and a physical nature.
6. Integration of the activities of other public health bureaus in their programs for workers; for example, the control of cancer, syphilis, and tuberculosis.

The determination of the scope and nature of the industrial health problem in a given locality has been completed in most of the states. The fundamental information obtained in these studies forms a basis for many of the activities just listed. To accomplish these activities successfully, it will be necessary to integrate the work of the industrial hygiene division not only with other health services in the health department, but also with the work of other state agencies concerned with industrial health matters and with nonofficial organizations. Just how this may be accomplished may be illustrated by a few examples from actual experience.

Interdepartmental relationships.—Excellent interdepartmental relationships for the promotion of industrial hygiene activities now exist in a number of states, and notably in such states as California, Wisconsin, North Carolina, Rhode Island, and Idaho. For example, in the state of California, the industrial accident commission furnishes the industrial hygiene service of the state health department with copies of all occupational diseases reportable by law to the former agency. These are investigated by the health department. In addition, the factory inspectors of the commission call upon the industrial hygiene service of the health department to make technical investigations of potential health hazards in industry. Written copies of the results of such investigations are furnished to the industrial accident commission for action, since it is this latter agency which is charged by law to enforce rules and regulations designed for the protection of the health of workers. Practically identical relationships exist in Wisconsin.

In North Carolina, the occupational disease law provides that the industrial commission shall adjudicate the law and shall make investigations of health hazards in certain industries where a silicosis and asbestosis hazard exists. In these industries, preemployment and periodic examinations are required by law. The industrial commission has designated the North Carolina State Board of Health as its agent, and all investigations and physical examinations are conducted either by the State Department of Health, or under its supervision. Furthermore, the director of the industrial hygiene division of the State Department of Health of North Carolina is also the chairman of the medical board of the industrial commission. This close relationship between the two agencies most concerned with industrial hygiene activities in North Carolina has resulted in an excellent program of control of health hazards in industry.

Integrated services.—With reference to the integration of industrial hygiene services with other public health activities in a state department of health, some progress has been accomplished, but still much remains to be done.

Many of our health departments have limited the scope of their activities. It is realized, of course, that the primary function of a health department is the control of communicable diseases. There is no reason, however, why the scope of health work in this country should not be extended to include the prevention of chronic diseases. There is ample justification for such efforts. For example, it has recently been shown that the first 10 causes of death account for more than 79 percent of all deaths. Against only one, tuberculosis, have health departments in the past taken specific action. It is only in the last few years that any action has been taken with reference to some of the other leading causes of death. By contrast, the communicable diseases, on which most of our efforts are still directed, account for only 3 percent of the mortality in this country. If illness be used as a measure of needed services, then health departments should concentrate on upper respiratory diseases and digestive disorders. It would seem, therefore, that by approaching the adult health problem through industrial hygiene, emphasis will be given to those conditions now in need of evaluation and correction.

It should be evident that no industrial hygiene division, no matter how large, can cope successfully with all the problems before it unless its program is definitely coordinated with all the other health activities and with those of other agencies in a community. One illustration of such an integrated effort is pertinent at this time. Recently, the Division of Industrial Hygiene of the National Institute of Health conducted a cooperative study with the Utah State Board of Health, concerning the nature and extent of occupational diseases in that state. The information so obtained has been used as a guide in the enactment of legislation for the compensation of injuries to health resulting from exposure to industrial health hazards and in the support of a permanent program designed to control such hazards.

Without going into the details of the study, it is pertinent to list the various health services in the State Department of Health which cooperated in the investigation. For example, the district health officers of the areas in which

the studies were made took an active part in assisting Service physicians in the physical examinations of the various workers. All serological examinations were made by the State Board of Health laboratories. The dental division of the State Board of Health furnished the services of a dentist for oral hygiene studies. The division of epidemiology collected information on the prevalence of various diseases in the communities in which the establishments studied were located. With reference to the environmental investigation, the State Division of Engineering assisted in the study of the working environment and also made sanitary surveys in the communities in which the workers live. Thus, we have information not only on the exposures of the employees while at work, but also on the conditions under which they live. It is evident that by such an integrated program, public health is being practiced more effectively in Utah, and industrial hygiene takes on its real meaning—that is, health promotion among workers. In all of this work in Utah, excellent cooperation was received from organized labor, industry, the medical profession, and especially, from the industrial commission.

Public Health Approach to Industrial Hygiene Problems

At the present time, most state industrial hygiene units employ a very small number of personnel, usually a physician, an engineer, a chemist, and a secretary. Here in South Carolina I understand that the industrial hygiene division consists of a physician, an engineer, and a secretary. It should be evident that if all the factors influencing the health of our workers are to be considered, then it is necessary to draft all the resources at the disposal of a department of health as has been done in the example cited above. This is a perfectly legitimate view of the problem, if we pause to consider the method of approach which may be employed. For example, no one would dispute the fact that many of the diseases of childhood are not directly associated with the school environment; yet, this fact has not deterred our health departments and physicians from doing their most effective work in the

prevention of childhood diseases through the medium of the school.

The same procedure may be used in combating our adult disease by approaching the problem through the medium of the factory. The southern health officer may feel that, with the limited number of so-called industrial workers in his state, industrial hygiene activities are not justified. Yet, there is no reason why health departments cannot carry on a program of nutrition, venereal diseases, tuberculosis, or malaria control through the industrial groups. Malaria, for example, causes a loss of 14 days per year per man in southern industry, and according to some estimates is responsible for a reduction in the industrial output of the south by one-third.

By approaching the problems of adult health through the medium of the factory, health departments will be practicing effective public health among a vast number of people. At present such programs employ the home as a means of contact. When it is considered that industrial hygiene applies to the general health of the worker and not merely to his special occupational hazards and that there is definite need for the extension of the public health program among all gainfully employed adults, regardless of the type of employment, the broader approach to industrial health will commend itself to the modern public health worker as an effective and economical means of advancing the community health program.

In closing this discussion, it is desired to emphasize that our problems in industrial hygiene will be constantly increasing, rather than diminishing, in spite of all our efforts in the field. This is largely due to the fact that added responsibilities are given to administration due to a variety of causes. Increased mechanization in industries, the use of old and new chemical compounds in many industrial processes, the responsibilities given us by legislation, and those which have arisen out of the defense program, all of these factors and many more too numerous to mention, will add greatly to the burden of industrial hygienists in the future. It is essential that we continue to develop and broaden our programs in order to meet these exigencies as they arise.

AROUND THE STATE

Effort will be made to secure and publish news concerning the activities of individual physicians, and of the various medical societies of the state. Members of the Association, and especially secretaries of county societies, are urged to send in news items to the Editor.

DEATHS

Dr. George Dawson Walker, 62, of Johnston, died on September 29, 1941.

Dr. Walker, a general practitioner of the old school, had practiced medicine in Johnston for over thirty-five years. The great love, esteem and high appreciation in which he was held was evidenced by the great number who came to his funeral, the attendance being so large that less than half could be accommodated in the large church. At the hour of the funeral all stores and places of business in town were closed.

He is survived by his widow, Mrs. Nina Ouzts Walker and three children, James L. Walker of Johnston, Miss Elizabeth Walker of Columbia and Miss Margaret Walker of Hartsville.

Dr. Allston Moore Willcox, 62, of Conway, died on October 2nd. Dr. Willcox was graduated from the Medical College of the State of South Carolina in 1913 and served as a first lieutenant during the first World War. He is survived by his widow and two daughters.

Dr. Henry Norris, retired surgeon and founder of the Rutherfordton Hospital, died at his Litchfield plantation home, Waccamaw, October 6th. Dr. Norris was a prominent and outstanding surgeon of North Carolina until his retirement several years ago. During the World War he served as Division Surgeon of the Thirtieth Division. He is survived by two daughters and a son.

Notice has been received of the death of Dr. John Julius LaRoche, Jr., of Charleston. Born in 1887, Dr. LaRoche was graduated from the Medical College of the State of South Carolina in 1911. For several years Dr. LaRoche has been Associate Professor of Medicine at his Alma Mater.

NEWS ITEMS

Drs. R. B. Taft of Charleston, P. D. Hay of Florence, and W. S. Judy of Greenville, attended the Annual Convention of the American Roentgen Ray Society at Cincinnati. These three physicians are all members of this organization.

Dr. H. R. Coleman, Otolaryngologist, formerly of Columbia, has moved to Wilmington, North Carolina.

Dr. Wardlaw Hammond formerly of Greenville is now located at Camp Stewart, Georgia.

Dr. George Dean Johnson of Spartanburg was married on October 11, 1941. Mrs. Johnson was the former Miss Betty Heath.

Among those who attended the American Academy of Pediatrics in Boston were Drs. William Weston, Jr., and R. B. Josey of Columbia and Drs. D. L. Smith and D. L. Smith, Jr., of Spartanburg.

Dr. Jack Bell of Greenville and Miss Mary McLees of Greenwood were married on October 25, 1941.

Drs. John Fleming, P. M. Temple, L. H. Coleman and H. W. Koopman of Spartanburg attended the Central Association of Obstetricians and Gynecologists Meeting at New Orleans.

Dr. D. C. Bozard of Manning was one of the many Dodger fans who witnessed at first hand the World Series.

Speaking of golf, the following was found in the sports column of the News and Courier, October 20, 1941:

Our bulky friend, Dr. Hank Hoshall fought a thrilling, uphill battle in advancing to the second round of the tournament. Hank forgot he was qualifying and got into the second flight by mistake and when the pairings were posted he found he had to play Eddie Entwistle.

On the last day for playing first round matches Hank was in the locker room, sweating profusely in the palms. At 2:30 p. m. he had shed a pool of perspiration from multitudinous pores. (That boy, incidentally, has got plenty of pores.)

Finally the clock on the wall indicated it was 3 o'clock. Entwistle hadn't showed up. Hank majestically strode up to the board and, with a shaky hand, inscribed in bold letters: "Hoshall wins by default."

Dr. L. E. Madden and Dr. S. D. Pope of Columbia recently went to New York to attend a special meeting of the Academy of Medicine.

Dr. George Smith of Florence, an officer in the Medical Corps of the United States Army, is now located in Porto Rico.

Dr. John H. Murdoch, Jr. and Dr. John M. Settle have recently joined the Medical Society of South Carolina, Charleston.

Dr. Robert Wilson, Dean of the Medical College of the State of South Carolina, and Dr. Wm. Atmar Smith, Medical Director of Pinehaven Sanatorium, attended the three-day meeting of the American Clinical and Climatological Association, at Skytop, Penna., beginning October 15th. Dr. Smith presented a paper on "Cystic Diseases of the Lungs."

According to a joint statement issued on September 4 by the U. S. Director of the Office of Civilian Defense, F. H. LaGuardia, and the Chairman of the American National Red Cross, Norman H. Davis, State and local defense councils are the official agencies responsible for the coordination of all available resources which may be required for civilian protection in the event of belligerent action. Defense Councils should therefore acquaint themselves with the resources of the local Red Cross Chapters in providing food, clothing, shelter, nursing care, transportation, and other basic necessities and should integrate them into the comprehensive local program. Duplication of trained and experienced personnel and of available supplies of the Red Cross should be avoided except where supplementation is essential to meet the anticipated needs of the community.

SOCIETY REPORTS

Dr. John Scudder of the Department of Surgery, Columbia University, College of Physicians and Surgeons, addressed a joint meeting of the Medical Society of South Carolina and the Staff of Stark Army General Hospital in October.

At the regular meeting of the Columbia Medical Society in October Dr. Fred W. Rankin of Lexington, Kentucky, President-Elect of the American Medical Association, delivered a paper on **Modern Management of Peptic Ulcer**. The local speaker of the evening was Dr. Katherine Machmis of Columbia who discussed **Bronchial Asthma**.

The regular meeting of the Oconee Medical Society was held on October 13th. Following a delightful banquet at the local hospital at which the physicians and their wives were the guests of Miss Etta Robbins, Hospital Supervisor, Dr. S. H. Ross, Fort McClellan, Alabama, discussed the **Army Medical Corps** and Dr. George Wilkinson of Greenville presented a paper on **Amebiasis**.

The October meeting of the Spartanburg County Medical Society was held at Camp Croft, S. C. with the medical staff of the Camp Croft Hospital in charge of the program.

The October meeting of the Greenville County Medical Society was designated as The Medical College of the State of South Carolina meeting. The scientific program was composed of three papers by three members of the faculty of that institution. Dr. Edward F. Parker, Associate Professor of Surgery, discussed **Present Knowledge of Shock**. Dr. William H. Kelley, Professor of Medicine, spoke upon the subject of **Diseases of the Aorta**. Dr. Robert Wilson, Dean and Professor of Medicine, presented a paper on **Diagnosis of Coronary Disease**.

The Fourth District Association met on October 14th in Union with the Union County Medical Society as hosts.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

Case of Dr. Robert Wilson, Jr.

ABSTRACT NO. 441

Student T. G. Herbert, Jr. (presenting):

History: 13 year old negro girl admitted on 9-3-41 with chief complaint of "pain in stomach." Onset two weeks before admission and characterized by a generalized aching and an occasional sharp pain in the abdomen. Felt feverish; no chills. Vomited practically everything taken by mouth since onset of illness. One week ago noted progressive distension of the abdomen. Had some dyspnea on exertion, weakness, dizziness, "swinging in the head," palpitation since onset.

Past History: Felt well until onset of present illness. Tonsillectomy at Harlem Hospital eight years ago. Frequent headaches.

Physical Examination: T. 99.2, P. 92, R. 22, BP. 145/100; also 160/100. Revealed a fairly well nourished and developed negro girl who appeared acutely ill, weak and dyspneic. Eyes: Slight puffiness about eyes. Pupils react normally. No jaundice. Fundi: discs pale; veins dilated; some edema of discs; arteries silver-wire in places and light streak irregular; vessels tend to be small and tortuous. Ears and nose normal. Teeth moderately carious. Tongue furred. Throat not unusual. MM—marked pallor. No lymphadenopathy. Skin dry; numerous scars on lower extremities. Ulcer on right leg anteriorly. Chest and lungs normal. Heart: enlarged to the left. PMI in 5th. ICS outside MCL. Blowing systolic murmurs at aortic and pulmonary areas; blowing, rumbling presystolic and systolic murmurs at the apex. Bounding pulse. Abdomen moderately distended and tense. Fluid wave elicited. Liver and spleen not felt. Tender throughout lower abdomen with voluntary rigidity 2 in. below and to the right of umbilicus. Reflexes: sluggish. Extremities normal, except for lesions described.

Laboratory:

Urinalysis	9-4-41	9-8-41	9-15-41
Spec.	Vd.	Vd.	Vd.
App.	Pale turbid	Same	Same
Sp. Gr.	1.005	—	1.009
Reaction	Acid	Acid	Acid
Albumin	Three plus	Three plus	Three plus
Sugar	0	0	0
Acetone	0	0	0
RBC	100	6	10
WBC	0	100-clumps	10
Casts	0	0	0
Epith.	One plus	One plus	—

Blood 9-4-41

RBC 1.37

WBC 7,200

Hb. 7.5 gms.

PMN. 75%

Lymphs 15%

Eosino. 10%

RBC. Just shadows, aniso and poikilocytosis, suspected sickling.

9-6-41 No sickling in sealed preparation in 36 hours.

EKG: Left ventricular preponderance.

9-7-41 Urea N—157 mg.

Creatinin—15.6 mg.

9-21-41 162 mg.

18.36 mg.

Wassermann and Kline negative.

Course: Vomiting continued. Face remained puffy with evidence of fluid in abdomen. Tenderness in both costo-vertebral angles. Convulsions on 9-16-41 and 9-17-41. Comatose on 9-22-41 and temperature up to 101.2. Expired on 9-22-41 at 9:55 P. M.

Dr. Robert Wilson, Jr. (conducting): I may add that while this patient was in the hospital she insisted on having every meal, ate each one that was brought to her with good appetite, and then vomited everything she ate.

Mr. Berry, will you open the discussion of this case?

Student Berry: Here we have a patient that was admitted in a practically uremic state and progressed steadily downhill to death. I think that chronic nephritis is the most logical disease condition to consider. We have a number of clinical and laboratory findings to bear out this diagnosis. Puffiness under the eyes, elevated blood pressure, hematuria and albuminuria, continued low specific gravity, ascites and changes in the eye grounds all help to confirm this impression.

I believe that the heart murmurs are purely functional, as we have no other reason for them.

Among the other conditions that might conceivably produce this sequence of events and terminal picture, there are congenital polycystic kidneys, but no masses were palpable in the kidney regions of this case and I believe the kidneys can usually be felt. Nephrosclerosis would undoubtedly produce the same state of affairs, but I am not sure whether it occurs in a child of this age and if it does it must be very rare. A long standing hydronephrosis from blockage, due to some congenital defect would also do the same.

Dr. Wilson: Why do you believe this to be chronic kidney disease rather than acute?

Student Berry: There is usually an accompanying history of some upper respiratory infection in an acute which we do not have here. My diagnosis is chronic glomerulonephritis.

Dr. Wilson: Do you think a presystolic murmur is ever functional?

Student Berry: No, I do not. I don't think it can adequately be explained.

Dr. Wilson: Mr. Martin, do you think the best differential points between acute and chronic nephritis are those that have been mentioned?

Student Martin: I don't believe that the fundal findings that we have here would occur in acute nephritis. The lack of history of any acute infection prior to the kidney involvement also point away from acute nephritis.

Dr. Wilson: I don't believe the lack of history of an acute respiratory infection is as important as a positive finding, such as the eye-ground changes. Can you explain the presystolic murmur?

Student Martin: No, I cannot.

Dr. Wilson: Do you think it was an error in clinical judgment, a mistake? You can speak freely, you don't know who made the observation.

Student Martin: That's what worries me. (Laughter).

Dr. Wilson: Mr. Quisenberry, what do you consider the chief differential points in distinguishing between chronic and acute nephritis?

Student Quisenberry: The permanent low specific gravity with a probable polyuria are characteristic of the chronic variety. We would expect to find a high specific gravity with anuria in an acute case. Enlargement of the heart with a left ventricular preponderance points to actual hypertrophy and not just dilatation which would indicate that the disease had been going on for some time. The silver wire arteries certainly suggest a chronic process.

Dr. Wilson: What do you think of the presystolic murmur, provided that I am not the one responsible for the observation?

Student Quisenberry: In that case I don't think much of it. (Laughter). I do not believe she had an organic lesion; no valvular defect.

Dr. Wilson: What sort of treatment do you think she should have had?

Student Quisenberry: I would have cut down on foods causing a high nitrogenous concentration and given her a good deal of fluid in an effort to rid her system of the nitrogenous products by the passage of more urine.

Dr. Wilson: Do you think she should have had a blood transfusion?

Student Quisenberry: Yes, I think it would be almost a matter of necessity with such a profound anemia.

Dr. Wilson: Sick cell anemia was the impression

of the first examiner at the time of her admission. We thought she had acute nephritis at first, but the persistent hypertension, enlargement of the heart, fundal changes and low specific gravity led us to make a diagnosis of chronic glomerulonephritis.

Dr. Kelley: I think the evidence points strongly to chronic nephritis. One other renal lesion that the patient may have had is a very protracted chronic, low-grade pyelonephritis.

Dr. Wilson, Sr.: The presence of ascites is not consistent with a diagnosis of chronic nephritis. If she had ascites I would expect her to have had something else in addition.

Dr. Beach: This child had a tonsillectomy performed eight years ago. At that time she was out of her natural habitat and I strongly suspect that this was done to remove a focus of infection, that might even at that time have been the beginning of the kidney disease that finally killed her. If she had a presystolic murmur then, she may have had a rheumatic infection. If the presence of the presystolic murmur is an accurate finding, I expect to see a valvular defect.

Dr. Lynch: (Demonstrating Heart and Kidney): We are very often unable to get the story of the initial onset in cases of this type. I agree with Dr. Beach that she probably had an acute infection at the time of her tonsillectomy. This is as classical a case of chronic glomerulonephritis as you will ever see. The contracted scarred kidneys that you see here, together weigh only 90 gms. The kidneys failure is not due primarily to an inflammatory fibrosis, but on account of the destruction of the glomeruli. The heart shows moderate hypertrophy, and some dilatation of the right and left chambers. There are no valvular lesions. She had a definite bilateral hydrothorax and ascites. We do not know all that we should about edema, but with an anemia this severe, I should think that changes would occur in the chemical and physical characteristics of the blood and tissues that would account for it. I would like to know if it is possible to get abdominal pain in helminthiasis, as ascaries were found in her intestines.

Dr. Beach: Yes, you can get pain with parasitic infection, as the worms are capable of causing obstruction. I think that it is quite possible that this patient had some nutritional edema as well as a nutritional heart.

Dr. Lynch: In that case the obstruction really causes the pain and not the worms directly. I agree that she must have had a food deficiency, on account of the long continued vomiting, if for no other reason.

Dr. Kelley: Did she have a uremic colitis?

Dr. Lynch: No, there was no evidence of such a condition. Neither did we find the rather widespread vascular sclerosis after associated with chronic kidney disease.

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THE SOUTHERN MEDICAL ASSOCIATION

The 35th annual meeting of the Southern Medical Association will be held in St. Louis, Monday, Tuesday, Wednesday and Thursday, November 10-13. The official activities of the Association will begin on Monday rather than the usual day Tuesday as originally planned, and close Thursday afternoon at 6 P. M. With the exception of this one-half day change, the meeting will be as scheduled. The St. Louis program will begin Monday afternoon and will be concluded at noon on Tuesday, the program being short clinical presentation by physicians from St. Louis. Tuesday afternoon the general clinical session, a program arranged and conducted by the President, will be presented. Then from Tuesday noon through Thursday afternoon the nineteen sections of the Association and the three conjoint societies will be in session.

On Tuesday evening, as a feature of the General Session, Dr. Paul H. Ringer, President of the Association will deliver his presidential address, this to be followed by the President's reception and ball.

The Scientific Exhibits space has been completely filled which will insure one of the most interesting parts of the meeting.

All scientific activities will be at the St. Louis Municipal Auditorium, which is conveniently located to all the downtown hotels.

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WOMAN'S AUXILIARY

SOUTH CAROLINA MEDICAL ASSOCIATION

ACTIVITIES OF AUXILIARY MEMBERS THROUGH PUBLIC RELATIONS PROGRAM

Mrs. Emmett Madden of Columbia, Chairman of the Public Relations Committee of the Auxiliary to the South Carolina Medical Association, brought an inspiring message to members of the Executive Board who met in Greenville on the 8th of October. Mrs. Madden asked that each Auxiliary member inform herself as to the health needs of her community, co-operate with organizations engaged in health work, and suggest health programs to program committees of other clubs to which she belongs.

The Auxiliary to the South Carolina Medical Association has as a guide a definite program of activities planned by the Public Relations Chairman of the Auxiliary to the American Medical Association. This program appears in the Post Convention issue of the Bulletin of the Woman's Auxiliary, and should be adjusted to the needs of the community by each county chairman.

This program suggests that we familiarize ourselves with the work of the State Department of Health, the aims of the local medical society with respect to community health needs, the objectives of the American Medical Association concerning a national health program, and the achievements of American medicine.

Under "Organization Policies and Plans" we are, as leaders of health education, urged to observe rigidly the first rule of procedure for all auxiliary work: Do nothing without the approval of the Advisory Council.

We are charged with the duty of informing ourselves regarding medical activities of lay organizations and cooperating with such groups in the promotion of acceptable medical programs; such as maternal and child welfare, anti-tuberculosis, cancer education, communic-

able diseases, mental hygiene and nutrition. We should assist lay groups in securing authentic speakers on health subjects. When invited to do so we should provide program material from American Medical Association headquarters for health dramas, diet and nutrition pamphlets, literature on health and medical economics, exhibits on health, copies of hygiene, etc.

The committee is particularly interested in Home Defense. A survey of the auxiliary in South Carolina showed that the members are active in both civilian and defense work through such organizations as the American Red Cross, the Parent-Teacher Association, Community Chest, and as members of Boards and Committees interested in welfare and social problems.

County Auxiliaries situated near army camps have made friendly contacts with families of doctors in service by inviting the wives to auxiliary meetings and to especially arranged social affairs.

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THE JOURNAL

of the

South Carolina Medical Association

VOLUME XXXVII

December, 1941

NUMBER 12

Sprue

HUGH SMITH, M.D.
GREENVILLE, S. C.

Better called chronic idiopathic steatorrhea and throughout my discussion the word sprue is chosen simply because of common usage and therefore simplicity. In selecting this subject, it was believed that it would be of interest to review the recent literature on this relatively uncommon condition in our state, and to report in some detail my experience with a few cases that I have seen during some eighteen years practice in South Carolina. If, by such a review, I can impress upon you a few of the salient features of this condition, which does occur in South Carolina and perhaps more often than I am aware, you will be more likely to think of the possibility and therefore make the diagnosis when confronted, at widely separate intervals, with this interesting and distressing syndrome, which is responsive to proper treatment.

Snell and Camp¹ list several synonyms for this clinical syndrome:

1. Non-tropical sprue.
2. Idiopathic steatorrhea.
3. Adult celiac disease.
4. Intestinal lipodystrophia.
5. Gee's disease.
6. Gee-Herter disease.

The condition is, to all intents and purposes, similar to tropical sprue, differing only in that it occurs in the temperate climates without previous tropical experience. One of America's foremost students of this subject is your distinguished guest speaker this evening. The subject of Sprue is fully covered by

Dr. Hanes in the Oxford System of Medicine and I would refer you to his work for further study of the subject. The definition of sprue given by him² is a thoroughly satisfactory one—"Sprue is a chronic deficiency state with a marked tendency to remissions and relapses characterized, when fully developed, by glossitis and stomatitis, anorexia, gastro-intestinal indigestion, by the passage of large fatty, frothy, foul smelling stools, by great weight loss, generalized muscular wasting and, in adults and some children, by macrocytic hyperchromic anaemia."

The history of sprue is of interest and recently an article on the subject by Miller and Barker³ was prefaced by a verse from the Bible. It is interesting to search for evidence in the old classics for descriptions of disease. The authors quoted Job 30-27: "My bowels boiled and rested not. The days of affliction prevented me." Any of you who have seen a severe case of sprue in relapse will thoroughly sympathize with Job, for he may well have had it.

In a recent publication of Ashford's Bibliography of Sprue with Additions, by Dr. Hanes⁴, he quotes from the writings of Aretaeus of Cappadocia, who practiced in Rome during Nero's reign in the second century A. D. This description of patients with diarrhea, which is bad in color, smell and consistence, and with associated atrophy of the body, is a classic and Dr. Hanes says that one can hardly doubt that Aretaeus was

describing patients with sprue. This will be found in the Puerto Rico Journal of Public Health and Tropical Medicine of June, 1933.

The more modern history² of sprue begins with a description of the disease by William Hillary in 1776. His observations were made in the Barbadoes. The term sprue—from the Dutch "sprouw"—was first used by Ketelaer, who, in 1669⁴, wrote of cases of aphthous stomatitis accompanied by feces so voluminous that "several basins or pots scarcely held these accumulations." The really classical descriptions of this disease complex came in 1880 when Sir Patrick Manson in China, and Vanderburgh in Java published their studies. Manson recognized that an inadequate diet was of etiologic importance.

The late Dr. E. J. Wood⁵, of Wilmington, North Carolina, wrote extensively about sprue in the United States. He stated that Dr. St. J. B. Graham, of Savannah, reported in 1905 four cases of sprue that originated in Georgia. My first case was seen in Florence, S. C., in 1921 and was the subject of some delightful correspondence with Dr. Wood.

The late Colonel Bailey K. Ashford, of the United States Army Medical Corps, wrote voluminously on the subject. He always believed that the monilia psilosis, commonly found in the stools of tropical sprue, was of etiologic importance, even if its role were only that of a secondary invader.

Etiology.

It is now generally believed, and the evidence seems definite, that sprue is a deficiency disease. The exact etiology is not known but recent work by Miller and Rhoads, whereby they have produced in hogs, by feeding a deficiency diet, a state closely resembling sprue, seems to establish the etiologic relationship with a deficiency state.

Hanes² suggests that the deficiency state in sprue may arise in one of the following ways:

1. Deficiency of the extrinsic factor.
2. Defective gastric digestion due to deficiency of the intrinsic factor.
3. Poor absorption from the intestine.
4. Deficient storage by the liver.
5. Or by a combination of several of these factors.

Haden⁶ says a "nutritional disease is due to an inadequate supply, absorption, or utilization of vitamins, mineral salts, or nutritional factors normally formed in the body from food elements."

The characteristic steatorrhea of sprue is due to an inadequate absorption of fats by a damaged intestinal mucosa. Barker and Rhoads⁷ have apparently established this fact by sound laboratory investigations. By determining the total blood lipids at two, four, and six hours after a meal containing two grams of fat per kilogram they have shown that the total blood lipids remain almost unchanged in active sprue before adequate treatment and that the same patients show a normal blood lipid response to the same meal after treatment. The failure of the lipid content of the blood to increase in sprue must be due to a failure of absorption by the intestinal mucosa, for there is no undue motility through the small intestine in sprue. They, therefore, conclude that the diarrhea of sprue results from the malabsorption, rather than the malabsorption from diarrhea. Their studies further indicate that the improvement from liver extract is due to some specific effect in converting a malabsorbing intestine to one of more normal function.

Wilbur and Snell⁸, in discussing deficiency states associated with gastro-intestinal disease, define sprue as "A clinical syndrome characterized by stomatitis, fatty stools, emaciation, and disturbances in the metabolism of calcium, with hypocalcemia, osteoporosis and, at times, tetany." Cowgill⁹, in discussing this paper, reports some interesting laboratory observations on vitamin deficiency diets. He offers the thought that certain experiments indicate the possibility that different clinical pictures, different symptom complexes, may be due to the same fundamental cause, as: dogs subsisting on diets markedly deficient in vitamin G—riboflavine—develop profound collapse after about one hundred thirty days. This collapse may be treated successfully and with striking results by the parenteral administration of riboflavine, the animals recovering sufficiently in about six hours to stand and, on the following day, they are able to run around and ap-

pear to be normal. On the other hand, dogs receiving the same basal diet plus one-half the daily amount of riboflavine found adequate to maintain normal health, never exhibit this collapse and live more than twice as long as the "acute" animals, but they do develop a true ataxia associated with spinal cord degenerative lesions. Cowgill wonders if these two results—namely, acute collapse without ataxia characteristic of the "acute" deficiency state and the ataxia exhibited by the dogs on the less deficient diet—both evidently due to the same dietary deficiency operating to a different degree, may not explain some of the controversial interpretations now given various symptoms.

Pathology.

The morbid changes found in sprue have been variable and often slight. No clear cut pathological picture is accepted as characteristic of this disease. The gastrointestinal tract has naturally been the point of major interest. Most reports have indicated chronic inflammation of the duodenum and jejunum. The intestines are often thin and atrophic and show no more change than is compatible with a deficiency state. No acceptable evidence of specific infectious origin has been produced. Mackie and Fairley (quoted in 9) believe that sprue is primarily a disease of the intestinal tract which, if progressive, results in degeneration and destruction of the absorbing and secretory tissues as evidenced by degenerative and atrophic changes throughout the small intestine.

Clinical symptoms.

Variability of clinical symptoms and a tendency to relapse and remission are the rule. Variability is due to the fact that in some cases the blood changes are striking; in others the gastro-intestinal symptoms are conspicuous; and in others the disturbed calcium metabolism dominates the picture. A careful history will usually reveal a diet badly balanced, probably an excess of fats and starches and poor in qualitative proteins. In our state we would expect such a diet to result in pellagra and unless we are careful such a confusion might occur. Sprue may appear as a complication in a patient debilitated by chronic infections, such

as amoebic dysentery, or it may develop in a person in apparent good health.

The characteristic symptoms are:

1. Steatorrhea. Gee² described the characteristic stool perfectly. He wrote, "Signs of the disease are yielded by the feces; being loose, not formed, but not watery; more bulky than the food taken would seem to account for; pale in color, as if devoid of bile; yeasty, frothy, an appearance probably due to fermentation; stinking, stench often very great, the food having undergone putrefaction rather than concoction."

2. Gastro-intestinal. The onset may be slow, with flatulent distress and one or two such stools a day, or it may be acute, with severe distress, stomatitis, glossitis, profuse diarrhea and rapid emaciation. Anorexia is often troublesome, and vomiting may occur. The tongue becomes beefy red and eating painful. Later the tongue becomes atrophic and bald, like that characteristically seen in pernicious anaemia. As a rule the gastrointestinal symptoms are directly proportionate to the severity of the disease.

3. Loss of weight. In severe cases emaciation may become extreme. Ashford² says that "Sprue literally dissects its victims." Their skin becomes brownish and lustreless and Hanes² compares their color to that of a rusty grape-fruit.

4. Anaemia. In the milder and in early cases there is usually a hypochromic, normocytic anaemia of variable degree. In the severe case and in relapse the anaemia is more often hyperchromic and macrocytic, which is one evidence that has made it seem related to pernicious anaemia.

5. Defective calcium metabolism is the result of the long continued loss of calcium salts through defective absorption. Osteoporosis and tetany may occur in the severe cases. Hypocalcemia is the rule in active sprue. In severe cases occurring in childhood dwarfism may result. According to Telfer¹⁰ the absorption of calcium occurs in a relatively small area of the duodenum and jejunum, which is significant in view of the known anatomic lesions in sprue. Clinical evidence of the lesion in this part of

the small intestine will be found on roentgenologic examination.

Laboratory features.

1. Anaemia—as described under clinical symptoms—hypochromic in early and mild cases and hyperchromic and macrocytic in severe cases. A very high color index often occurs in sprue.

2. Achlorhydria gastrica is not a constant finding. It is probably no more often found in sprue than in any series of patients of similar age groups.

3. Blood sugar studies. In sprue there is a low fasting blood sugar and after a glucose tolerance the curve is flattened. Hanes² says that a rise of more than forty milligrams above the fasting level is most unusual. This is important in differentiating the severe steatorrhea of sprue from pancreatic steatorrhea. In the latter there is usually a diabetic-like glucose tolerance curve and frequently an associated glycosuria.

4. Stools. There is an excess of fats, both neutral fats and fatty acids.

5. Blood calcium, phosphorus, and cholesterol are usually reduced in sprue.

Roentgenologic features.

In the past few years several workers have called attention to definite changes in the upper small intestine demonstrable on X-ray examination^{9, 10}. These changes probably result from a deficiency state and are not of necessity diagnostic of sprue. Their intensity and extent vary directly with the severity of the clinical picture. Mackie et al⁹ have reported their observations before and after treatment with liver extract and have demonstrated regression under such specific therapy. I have been able to confirm their results in my own small series.

The X-ray changes noted are:

1. Variation in contour and caliber of the intestinal lumen.

2. Abnormal motor activity with frequently a segmented distribution of the barium.

3. These changes may be localized or spread throughout the small intestine.

4. In the duodenum the mucosal folds appear thickened and the lumen irregularly dilated.

5. In the jejunum the valvulae conniventes are thickened and irregular in size, giving a

distorted mucosal pattern. The jejunal lumen also appears dilated in segments and the barium is seen in sausage-like masses, smooth and large, with adjacent segments quite empty. The motor activity is not increased through the small intestine.

Differential diagnosis.

The condition most apt to be confused with idiopathic steatorrhea is pancreatic steatorrhea. In both there is marked weight loss associated with typical stools. There are differential features, however, that will usually establish an accurate diagnosis. The essential difference of course is that in pancreatic steatorrhea there is an absence of pancreatic juice in the duodenal contents, whereas in sprue pancreatic juice is present in normal amounts. In sprue the fats are presumably properly split and are unabsorbed, and in pancreatic insufficiency the fats are not split and steatorrhea results. As a result of the absence of pancreatic juice the muscle fibers are not completely digested and are found in large numbers in the stools. Therefore, azotorrhea and creatorrhea occur in pancreatic steatorrhea and not in sprue. The other important differential point is the flat glucose tolerance curve in sprue in contrast to the diabetic-like curve in pancreatic steatorrhea.

Pernicious anaemia should not cause much difficulty. There is not much weight loss and there is not the typical diarrhea and there is always achylia gastrica. In pernicious anaemia of long duration there are frequently associated spinal cord degenerative symptoms and these are uncommon in sprue¹⁴ even of long standing or in severe relapse.

Pellagra differs in that there are the characteristic skin and mucous membrane lesions and, in severe cases, the mental symptoms. The glossitis and oesophagitis are more painful and salivation is a common symptom.

Amoebic dysentery is readily distinguished by the presence of blood and pus and *entamoeba histolytica* in the stool. Several authors express the belief that a chronic amoebiasis may be followed later by the development of sprue.

Chronic ulcerative colitis of the Bargen type

presents an entirely different picture. The stools are small and contain much blood. Fever is often present. The pain is more severe and there is not the typical offensive, bulky stool. Sigmoidoscopic examination reveals an acutely inflamed mucous membrane. A barium enema shows a small, tube-like colon in contrast to an atonic and redundant colon in sprue.

Treatment.

Until recent years sprue was treated as well as possible by diet and various medications. One of my cases will illustrate the treatment followed in 1921. In 1926 Bloomfield and Wyckoff treated a case of sprue with the liver diet brought out a year or two before by Minot and Murphy. Their patient had a pernicious-like anaemia, and the result was most satisfactory. Within a few years their results were confirmed by others and it is now an established fact that adequate amounts of liver extract given parenterally will relieve sprue and that the patients can live in comfortable health with an adequate maintenance ration of liver extract parenterally. There are two important facts to remember, however; first, it takes much more liver extract to control sprue than pernicious anaemia and; second, the liver extract is best given parenterally. Five to ten cc. of liver extract daily for five to ten days will usually relieve the acute or severe picture and five to ten cc. at intervals of five to fifteen days will maintain a comfortable state of health. Each patient must determine his maintenance ration and the proper dose is the amount that will prevent the recurrence of flatulent distress and diarrhea. It should be given two or three days before symptoms return.

In the acute stage the diet should be one of high protein, low fat, and low carbohydrate content. Before the days of liver extract this was the basic factor of treatment. Now the diet can be fairly rapidly brought back to normal, as relief follows specific therapy.

Because of the calcium loss, it is well to give calcium with viosterol during the recovery period. If achlorhydria is present, dilute hydrochloric acid should be given. It is a deficiency disease and vitamins in liberal quantities are perhaps indicated until a well balanced diet has been tolerated long enough to feel

confident no further deficiency is occurring. Perhaps the vitamins B complex and C and D are especially indicated. Such is the modern and proper treatment of sprue. I now want to describe in some detail my first case and the extraordinary diet which resulted fortunately in a lasting cure for him.

Case Reports.

No. 1. K. C. K.: White male, farmer, age 41 when admitted to the McLeod Hospital of Florence, S. C., in May, 1921. He complained of severe diarrhea, great loss of weight, and weakness. He had never been out of the Carolinas. Prior to an attack of influenza in March, 1920 he had always enjoyed excellent health. He lost some weight and had some diarrhea after the influenza, but by summer he was apparently well again. In September he again had diarrhea, which was not severe at first but which did not respond to the usual remedies. He was six feet tall and at this time weighed 185 pounds. The diarrhea continued through the winter and he lost weight steadily. When admitted to my service his weight was 107, a loss of 78 pounds in some six months. He described a painless, bulky, offensive diarrhea which was typical. He was having three to ten stools in twenty-four hours.

He had lost weight to the point of emaciation. The mouth was sore, the tongue bald, fissured and dry, and superficial mucosal ulcerations were noted in the mouth. Otherwise physical examination was negative. X-ray examinations of the chest and gastro-intestinal tract were reported negative. The laboratory studies reported urines repeatedly negative, stools reported an excess of fats and light in color and foul. No amoeba found. Gastric analysis showed an absence of free hydrochloric acid on fractional analysis. Blood Wassermann negative. Hemoglobin 35%, reds 1.05 million, color index 1.7, white cell count 2,100, on admission. The stained smear showed marked variation in size and color of the red cells, no nucleated reds, no abnormal white cells, and no plasmodia.

On reviewing my record of this case, the following note was found, written several days after admission. "The patient tells me that these stools occurred in the morning hours until he became bed-ridden. The sore mouth only began a few weeks ago. In the beginning he was able to work in the afternoons as he felt much better after the diarrhea stopped about mid-day. His mental condition is good. There is no skin nor nervous evidence of pellagra. The blood picture is that of pernicious anaemia, but the marked weight loss and absence of any red cell regeneration is against this. X-rays of the chest rule out tuberculosis.

The absence of bronzing, the marked anaemia, the mental activity are against Addison's Disease. The absence of amoeba and ova rule out such infestations. The stools are of a definite character and the diarrhea, the anaemia, the sore mouth, and the emaciation certainly suggest a diagnosis of sprue. I have never seen a case of known sprue and make such a diagnosis tentatively."

The patient was put on a diet of boiled sweet milk and buttermilk, ripe bananas, and rare steak. He began to improve rapidly, when, after adding three eggs daily to his diet, a setback occurred, which resulted in the lowest weight recorded—104 pounds on June 15. After withdrawing the eggs, he rapidly improved and diarrhea subsided. On July 5 he was discharged, weighing 118 pounds, with a diet of boiled sweet milk and buttermilk, eleven pints, bananas, thirteen, and steak, one pound a day. Dr. C. R. May of Bennettsville reported regularly and on July 23 the patient weighed 147 pounds and was doing light work. He was having one formed stool a day and had gained 43 pounds in 38 days.

Sixteen years later—October 2, 1938—Dr. May very kindly wrote that he had looked up the patient at my request. He is now fifty-eight years old and weighs 200 pounds. He considers himself perfectly well and reports that he has never had a recurrence of his trouble. Knowing that relapses and remissions are so characteristic of sprue, I wonder that this man has enjoyed seventeen years of good health without diet restrictions and without liver therapy. The diagnosis of sprue seems satisfactorily established. A copy of my records was submitted to Dr. E. J. Wood, then living, and he wrote, "The case fulfills more exactly all the requirements than any American case with which I am familiar" and he added, "Did I tell you that the Public Health Service is saying that there is no real sprue in this country and that its presence is an error or a vagary of mine?" That letter was written less than eighteen years ago and now the American bibliography of sprue is quite extensive.

Case No. 2.

Dr. B., a physician, age 47 when first seen in October, 1927. At that time he was overweight and had found an occasional glycosuria. His weight was

201 pounds. No digestive history other than a history of dysentery for a few weeks at twenty-three. No diarrhea since. Except for obesity and a mild diabetic state, his examinations were negative. His fasting blood sugar was 140 milligrams per cent and two hours after his usual lunch it was 200 milligrams per cent, with a slight glycosuria.

Next seen in 1933 with an acute subacromial bursitis. Weight then 189 pounds, blood pressure 145/100, no digestive distress. After reducing his intake of sweets he had lost ten pounds and had shown no further evidence of diabetes. Blood sugars then 86 milligrams per cent fasting and 115 milligrams per cent one hour after lunch. I wonder now if this low one hour figure was even then significant.

Next seen in February, 1935. For a year he had been very sick with diarrhea, anorexia, and had lost weight to the point of emaciation. He was bed-ridden and had been able to work only three months the preceding year. He had consulted several colleagues and various diagnoses were made. During the fall of 1934 the glossitis and anaemia were severe and a diagnosis of pernicious anaemia was made. His blood counts, reported by a reliable laboratory, had been as low as 2.8 million reds with a hemoglobin of 95 per cent, a color index of 1.7. The red cell counts ranged from this low to 4.9 million, always with a hemoglobin of 90 to 100 per cent. A gastric analysis in February, 1934 reported 62 points of free hydrochloric acid and another in December, 1934 reported an absence of free hydrochloric acid.

When seen at home in February, 1935 he had lost 67 pounds. While talking to him before making my examination, he excused himself to have a bowel movement. After seeing this stool and waiting nearly thirty minutes before ventilation made his bed room again habitable, the diagnosis was made. He had taken three cc. of a liver extract parenterally once a week since the diagnosis of pernicious anaemia a few months before. At this time his blood studies showed hemoglobin 108 per cent, reds 5.2 million, color index 1.

His weight was estimated at about 100 pounds. A diagnosis of sprue was made and a diet of buttermilk, steak, and bananas was prescribed. The liver extract was given daily and calcium with viosterol and dilute hydrochloric acid were added. His response was almost dramatic. From a bed-ridden and hopeless person he was soon able to sit up and two months later he drove sixty miles to report his progress. He has been under observation since then and has been actively engaged in his practice for over two years. He is occasionally careless about his diet and also neglects his maintenance ration of liver extract, but he has learned a good deal about sprue and takes fairly good care of himself. His weight now averages 140 pounds.

I have made a diagnosis of sprue eight times in seventeen years. These two cases are re-

ported in some detail for they illustrate the severity of a well established case in relapse. The first case is of primary interest because of an apparent cure of seventeen years duration by diet alone. The other continues to suffer mild relapses occasionally. Both have been observed long enough to prove the diagnosis and both are enjoying apparently good health and are actively at work at this time.

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Tick Paralysis in South Carolina*

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The tick implicated in the transmission of tick paralysis in North America is the *Dermacentor Andersoni* Stiles. Recently, however, other species, such as the *Dermacentor Variabilis*, also have been incriminated as a causative factor in this disease. Both of these species are known as the wood tick, but the former is more prevalent in North West America. Moreover, both of these ticks are frequently found in many of the Southern States. The *Dermacentor Andersoni* Stiles is the means of transmission or causative agent of tick paralysis, tularemia, and Rocky Mountain spotted fever. Tularemia is not uncommon in South Carolina, but to date there has been little mention of tick paralysis; therefore, it may be worthwhile to report a case of

tick paralysis caused by the *Dermacentor Variabilis* which was treated in the Pediatric Department of Roper Hospital.

At this point it may be of interest to summarize briefly the life history of the *Dermacentor Andersoni* Stiles as given by Allen Mail and J. D. Greyson: "This tick appears as an adult early in the spring and attaches itself to the skin of large wild and domestic animals and man. The sexes mate when on the host animal, and the female after feeding for about seven days (sometimes more or less) and having increased many times in weight drops to the ground and lays about 4,000 eggs. After about thirty-six days the eggs hatch into minute six-legged larvae or seed ticks. The small larvae ticks crawl upon grass or other low vegetation, and when the opportunity offers, brush off on small animals, such as

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rabbits, squirrels, field mice, and other rodents. They remain on the host for about four days, during which time they engorge, then drop off to the ground, molt, and after about thirty-eight days emerge as eight-legged, middle-size ticks, or nymphs, which are still sexually immature.

"The nymphs attach themselves to the same kind of animals that the larvae ticks fed on. After about seven days they drop to the ground, molt, and in about ninety days emerge as adult ticks. The whole cycle may occupy two years or more."

This adult tick readily attaches itself to children and adults and begins feeding and engorging. The period may be as short as two or as long as six days before there is any evidence that the host is going to develop tick paralysis. Children are much more prone to be attached than adults.

Some research workers have claimed that it is possible to produce tick paralysis by attachment of the female tick to experimental animals. The time that elapses between the bite of the tick and the onset of paralysis is somewhat dependent on the size of the animal and the rapidity of the engorgement of the tick, and varies from six to thirteen days. Such experiments on the human subject at the present time are unwise, for it might result in a fatal outcome.

SYMPTOMS: The patient, who is apparently well one day, may on the next complain of some tingling and numbness in the legs and feet. Shortly thereafter, the patient experiences difficulty in walking, and his gait is of a staggering nature. A little later, he is unable to stand. In more severe cases, the hands and arms are affected, and even the muscles about the throat and tongue may be involved. At times, the respiratory muscles are affected and the patient may die of respiratory paralysis. The constitutional symptoms are of a mild nature. There are few complaints from the patient. The temperature is usually of a low grade type: 99°-101° F., pulse slightly elevated, and reflexes hypoactive or absent. The laboratory findings may or may not be of any importance.

Since this disease is quite rare east of the

Rocky Mountains, we are reporting a case that was treated in the Pediatric Department of Roper Hospital.

No. 17657, E. M. F., a four year old white female, was admitted to the Pediatric Department of Roper Hospital June 12, 1941. The history obtained was that this child became sick the morning prior to her admission, that she complained of weakness and general malaise, that she experienced difficulty on arising, and that her gait was of a staggering nature. However, these complaints ceased after about an hour, and the child played the rest of the day. On the morning of admission, the patient complained of headache and weakness in her lower extremities when she made an attempt to walk. On getting out of bed, she was unable to stand and fell to the floor. The patient was seen by a private physician, who referred her to Roper Hospital with a working diagnosis of poliomyelitis.

P. H. Pertussis in Feb., 1941. No other previous illness.

F. H. Mother and father living and well. One sister six years old, living and well.

PHYSICAL EXAM.: T. 99.8 P. 124 R. 28 B. P. 100/40. Poorly developed and nourished four year old white child whose physical development and oral hygiene suggest that there has been inadequate or unbalanced diet for some time. Eyes, ears, nose, and throat normal. Teeth carious with some oral sepsis. No stiff neck. Chest well-expanded with normal muscular reflexes. No rales heard. Heart not enlarged, rate rapid, rhythm regular, no murmurs heard. Abdomen soft and non-tender. Liver palpable. Spleen not felt. All abdominal reflexes present. The patient moved all extremities with good coordination of muscle. Patella reflexes were hypoactive, being more so on the left. Ankle jerk absent bilaterally. The child arose from a lying position without difficulty. Muscles of lower extremities collapsed to some extent when child jumped from a low table to the floor. She walked without difficulty, but had a staggering gait with over-extension about the knees. No abnormal reflexes present. Extreme flexion of sitting posture caused a certain amount of pain.

Laboratory findings:

Urinalysis: Completely negative.

Blood:

R. B. C. Hgb. W. B. C. Polys. Lymphs.
 4,000,000 11 gms. 11,000 64% 36%
 4,400,000 13 gms. 5,000 52% 48%
 6-16-41 Kolmer and Kline both negative
 6-17-41 Urea Nitrogen 15 mg%

Sugar 97 mg%

Chlorides 457 mg%

Calcium 10.3 mg%

Inorganic Phosphorous 5.1 mg%

Total Serum Proteins 6.99 gms

Serum Albumin 4.26 gms

Serum Globulin 2.73 gms

6-16-41 Macroscopic agglutinations for
 Typhoid, Paratyphoid A & B,
 Proteus X 19 and Brucella, all
 negative

Feces: Negative

6-12-41 Spinal fluid:

Total cell count 0

Total proteins 55 mg%

Sugar 45 mg%

Chlorides 740 mg%

Colloidal gold negative

Wasserman negative

Culture negative

Course: The child was put to bed, and her condition remained about the same until the second day. At this time, a nurse while combing the patient's hair discovered a partially engorged tick, which she removed. The tick was identified at the National Institute of Health as a female, *Dermacentor Variabilis*. Further search did not reveal any other ticks.

The child's symptoms cleared up quite rapidly, and on discharge twelve days following the removal of the tick, there was no muscular weakness present, but still a very slight ataxia. The patient was seen two weeks later in the Pediatric Clinic and appeared completely recovered.

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Recognition and Treatment of Common Painful Back Disorders

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While severe back pain is essentially an orthopedic problem, it is also one which is continually cropping up to puzzle the family physician and internist. Innumerable causes for back pain exist but the commonest causes for pain of such severity and persistence as to require consultation are the following: (1) hypertrophic spondylitis, (2) osteoporosis, and (3) rupture of an intervertebral disk.

Hypertrophic Spondylitis

Hypertrophic spondylitis is extremely common in overnourished patients of fifty years and beyond. The lower cervical and lumbar portions of the spine are chiefly involved in the process which appears to be a response to

mechanical factors rather than to toxins from focal infections. The intervertebral disks gradually lose their elasticity as middle life approaches, thus depriving the spine of an important shock-absorbing mechanism. More and more weight is borne directly upon the bodies of the vertebrae and the spaces between them are lessened. Abnormal mobility results which accelerates the grinding down of the articular cartilages at the rim of the bodies and the heaping up of interlocking osteophytes. Simultaneously calcification of the tendons at their points of attachment occurs. The most marked changes occur in the lumbar spine where weight bearing is most prominent and motion least restricted.

Involvement of the cervical spine produces vague pain in the spine itself, often accentuated by exposure and by protracted tension in the neck from uncomfortable position. Not infrequently pain radiates to the shoulders and down the arms. Spondylitis of the upper dorsal spine may produce pain simulating angina and is the usual etiological factor in "intercostal neuritis" in persons of this age group. Lower dorsal spondylitis may send radiations to the upper abdomen mimicking the pain of gall bladder disease, while the same condition in the lumbar spine is responsible for a large proportion of the attacks of ordinary "lumbago" and for many of the gradually developing cases of "sciatica." The symptoms of hypertrophic spondylitis are usually moderate, more annoying than disabling, and never interfere with good health.

Objective evidence of the presence of hypertrophic changes in the spine lies in demonstration of impaired motility in the spine and of characteristic changes in the X-ray picture. It should be remembered that rotation is chiefly a function of the thoracic spine, flexion and extension of the lumbar spine. When these movements are restricted, it is well to back up this observation with an X-ray which, in the typical case, will show increased calcification of the bodies of the vertebrae, narrowed but not obliterated joint spaces, interlocking and occasionally fused osteophytes and no calcification of the anterior ligament. The patient should be observed carefully as he gets up out of a chair; if he first shifts forward to the edge, then bearing heavily on the arms of the chair lifts himself upward with his shoulders and upper arm muscles, and finally propels himself forward and upward with a sudden shove on the arms of the chair, it is quite evident that his is unconsciously trying to protect his back.

The treatment of hypertrophic spondylitis is neither simple nor brilliant in its results. The majority of patients need sharp reduction in weight; a balanced diet of from 900 to 1200 calories daily will do this. They need to be warned against laborious work which adds to the wear and tear on inelastic cartilages but prolonged and complete inactivity is not ad-

visable. A hard bed is more conducive to comfort than one equipped with a soft, springy mattress. Eradication of foci of infection is a disappointing and scientifically unsound procedure as the bony changes in this disease represent response to mechanical factors rather than to bacterial toxins. Physiotherapy can be extremely helpful—short wave diathermy given frequently and for relatively long periods, thirty to forty-five minutes at each visit, has proven helpful during the acute exacerbations of discomfort which mark the course of this disease but it is doubtful if permanent improvement is afforded by such treatment. X-ray therapy on the other hand seems to induce marked amelioration of symptoms in many patients and this improvement is more or less permanent. I am very deeply impressed by the results which our roentgenologist, Dr. P. D. Hay, has obtained in several of these cases I referred to him. One elderly woman has been almost completely relieved of a persistent right upper quadrant pain suggesting gall bladder disease and another, after treatment of the mid-thoracic spine, has been freed from the pain, the dread, and the restrictions which go with the diagnosis of angina pectoris. X-ray therapy is the most promising thing on the horizon at present, but the other procedures mentioned above must not be neglected. Medicine has not been helpful—iodides and salicylates have been prescribed in abundance but to no avail.

Osteoporosis

While hypertrophic spondylitis is encountered usually in overnourished, robust men, osteoporosis is found principally in elderly and rather frail women. This condition is relatively common, four cases having been observed on the medical service of The McLeod Infirmary during the past summer. Until recently, however, it has frequently gone unrecognized as a cause of severe back pain. Osteoporosis is characterized pathologically by extreme decalcification of the bone. Apparently this does not result from inadequate calcium deposition in the osseous matrix as in rickets, but from failure of the osteoblasts to lay down sufficient osteoid tissue. In other words, it is not a disease of calcium metabolism, from which it

follows that providing adequate amounts of calcium supplemented by vitamin D cannot be expected to replenish this mineral in the fragile osteoporotic bones. There is very strong evidence¹ that the post-menopausal state is the most common etiological factor in the development of osteoporosis. The spine and pelvis are sites of predilection while the skull is rarely involved².

The commonest symptom is that due to a vertebral lesion. The patient, usually a woman about 60, who may have had annoying weakness and pains indefinitely localized in the back for two or three years, suffers a slight jar such as sitting down too hard or going over a bump in an automobile. She experiences a sudden snap accompanied by an acute pain in the back. The pain is very severe and may confine her to bed for a good many days since she quickly finds that recumbency affords relief while any activity results in excruciating exacerbation of her symptoms. Quite often the pain is projected along nerve roots to the front of the thorax, the abdomen or down the legs. One of my patients had been treated a year for cholecystitis, another for ureteral colic.

The diagnosis is made by X-ray which, if it does not show an actual collapse and buckling of a vertebra, will usually reveal expanded intervertebral disks encroaching on the faintly outlined vertebral bodies. The X-rays of one of my patients showed a denser deposit of calcium in the plaques of the adjacent abdominal aorta than in the bodies of the vertebrae.

Treatment of osteoporotic painful backs aims to relieve pain by correcting any existing deformity, prevent the development of additional deformities, and supply the deficiency of calcium and phosphorus in the bone. Pain is relieved best by mild sedatives and heat and some support for the back. Until I can get the patient fitted with a Taylor brace, I prefer to have her lie flat in bed with slight extension of the spine provided by a firm pad opposite the site of the collapsed vertebra. With a Taylor brace applied, there is no reason for denying the patient a reasonable amount of activity at once. As for supplying the deficiencies in calcium and phosphorus, I routinely prescribe a capsule of dicalcium phosphate with viosterol

four times a day. I have never been able to demonstrate any recalcification of the affected vertebrae but there is good reason to believe that this readily available supply of the two mineral substances at least retards the process of bone resorption. Recent work pointing to the possible relationship between the menopause and the development of osteoporosis suggests the desirability of administering some estrogenic substance regularly.

The results of treatment, certainly as far as relief of pain and freedom for moderate activity are concerned, are most gratifying. On the other hand, when the regimen is stopped, the symptoms frequently recur. The sudden appearance of severe and intractable back pain in elderly women, aggravated by any motion of the spine, is sufficient reason to suspect osteoporosis with pathological fracture of a vertebra.

Ruptured Intervertebral Disk

No less spectacular than the collapse of a vertebra due to osteoporosis and much more commonly encountered is rupture of an intervertebral disk. A very brief consideration of the anatomy of the intervertebral disk will serve to clarify many of the features of the clinical picture resulting from derangements of these structures. Since the disks between the 4th and 5th lumbar vertebrae and between the 5th lumbar and sacrum are involved in fully 96% of all instances of this trouble^{3 4 5} for all practical purposes, the rest of the spine may be disregarded. Each disk is composed of three parts: (a) the annulus fibrosus, a thick fibrous retaining ring forming the periphery of the disk, thickened anteriorly where it blends with the strong anterior longitudinal ligament and very feebly re-enforced posteriorly by the thin posterior longitudinal ligament which separates the disk from the neural canal; (b) the nucleus pulposus which occupies the center of the disk, a soft, semi-fluid mass normally under considerable tension; (c) the cartilaginous plates which serve as the superior and inferior surfaces of the disks, separating the annulus and nucleus from the adjacent vertebrae. The spinal cord ends opposite the intervertebral disk below the first lumbar vertebra, hence

any neurological disturbance produced by lesions of the 4th and 5th disks comes not from compression on the cord but from pressure on the nerve roots forming the cauda equina which are firmly fixed by sheaths of the dura mater as they approach their points of exit at the intervertebral foramina. The sequence of events leading to the development of the picture of ruptured nucleus pulposus is about as follows: Some injury such as a fall or a severe strain when the lumbar spine is flexed results in a tear in the annulus fibrosus. Since the annulus is liberally supplied with sensory nerves this injury results in a good deal of pain located in the lower back. At this time there is no radiation of pain. With good luck and sufficient patience the injury to the annulus and overlying posterior longitudinal ligament undergoes repair so that pain and muscle spasm subside, and the nuclear material is retained in its usual place although now held in by a definitely weakened fibrous ring. Then comes a second injury, especially apt to occur in individuals engaged in activities that place strain on the intervertebral disk by stooping or lifting from a bent-forward position. Again the pain appears as the annulus is lacerated but this time not only does it appear in the back at the site of the injury but almost immediately agonizing pain comes down the back of one leg in the typical fashion of sciatica. This is due to the fact that a portion of the semi-solid nucleus pulposus has finally been extruded through the tear in its restraining ligament and, pushing back into the lumen of the neural canal of the spine, has impinged on either the 5th lumbar or 1st sacral nerve roots causing painful tension on them.

In the light of the foregoing anatomical and pathological data, the history of many cases of low back pain with sciatica may be so characteristic as to indicate not only the probable diagnosis but also the exact level of the lesion. A very few minutes of painstaking questioning will bring out evidence for a reasonably positive diagnosis. The syndrome of disk injury with impingement on the sciatic roots is now so well established that it can be made by any up to date physician.

Dandy³ says that the diagnosis of ruptured

vertebral disk in the fourth and fifth lumbar interspaces can be boiled down to a history of "low midline lumbar backache plus pain down the back of one or both legs, the pain is intensified by coughing and sneezing, and the pain must be recurring and not continuous." That succinct statement presents the syndrome in its simplest terms. The initial symptom of the disorder is almost always pain low in the back, commonly recalled by the patient as an attack of "lumbago." This "lumbago" is due to trauma to the intervertebral disk and to the posterior longitudinal ligament; it is relieved by immobility and intensified by movements affecting the spine. Repeated attacks of "lumbago" often precede the onset of sciatic pain, many originating from spinal injuries so trivial as to escape notice. "Sciatica" appears soon after one of these attacks of backache, sometimes they appear together as in cases where severe injury not only ruptures the annulus but simultaneously causes protrusion of the nucleus. Along with the agonizing pain down the back of the hip, thigh and calf, so familiar to us all, the sufferer from sciatica may complain of intense burning sensations and other unpleasant parasthesias in the foot or on the lateral aspect of the lower leg. The intensification of pain by coughing and sneezing are points which should be brought out in questioning; such evidence is almost pathognomonic of a disk lesion. Love and Walsh⁴ regard the intensification of the pain which occurs during sleep as similarly suggestive of a disk lesion.

There are comparatively few signs in connection with the condition but they are dramatic and unmistakable. In the first place there is the general attitude of the patient characterized by stiffness and immobility of the lumbar spine which is usually held slightly flexed and "off center" from tilting of the pelvis to favor the painful leg. A positive Lasegue sign is present in from 85 to 100% of disk cases—this test is familiar to many: With the patient supine, the thigh is raised until it forms a right angle with the trunk and then the leg, which has remained flexed, is extended until pain begins along the course of the sciatic nerve; at this point the foot is then

dorsiflexed to determine whether additional pull on the sciatic nerve intensifies the pain. Tenderness along the course of the sciatic nerve is another sign of frequent occurrence and almost as often the Achilles reflex is diminished or absent on the side of the pain. The demonstration of areas of diminished cutaneous sensation (hypesthesia) or even anesthesia is a less frequent sign of disk protrusion but when present practically erases the last doubt about the diagnosis.

Formerly it was considered imperative to have X-ray confirmation of encroachment on the neural canal following the injection into this space of some contrast medium, either iodized oil or air. But with the clear-cut definition of the clinical picture of the syndrome, the role of X-ray in the diagnosis has assumed a position of very secondary importance. Dandy³ goes so far as to say: "If the diagnosis is questionable, an exploration of the region is preferable to spinal injections of air or iodized oil." Similarly another diagnostic procedure in this condition, lumbar puncture with determination of the total protein in the spinal fluid, is rapidly being discarded. Spurling and Grantham⁶ report that the total protein content of the spinal fluid was elevated in only fifty percent of proved cases of herniation of the nucleus pulposus in their series. So definite is the clinical picture of this common disease of the intervertebral disks that an overwhelming percentage can be diagnosed and localized by the history and physical examination alone and all accessory diagnostic tests can and should be dispensed with.

Given a diagnosis of ruptured disk there is only one sure and relatively permanent cure—surgical removal of the injured and protruding portions of the disk. This is no longer a Herculean task. Refinements in technique for this procedure have reduced the risk to almost negligible figures (0.5%⁴) while at the same time enabling the work to be done without sacrificing the stability and strength of the spine. The question very naturally arises—aren't there some conservative measures which can be adopted, reserving surgical treatment for the time when other procedures have failed? Until the past three years, every one of my

patients with this symptom picture was treated conservatively—quite unwittingly to be sure, because in those years the possible connection between injuries of the intervertebral disks and pain in the sciatic nerve was certainly not generally recognized. Among those conservative measures I can recall employing the following: Protracted bed rest, bed rest on a hard bed, bed rest with traction on the legs, diathermy, massage, plaster jacket, adhesive strapping, removal of foci of infection and back in the distant past, injection of saline into the sheath of the sciatic nerve. The diversity of procedures is sufficient evidence of their ineffectiveness. To be sure some of the patients got better; what happened in those cases I do not know—probably the herniated nucleus underwent spontaneous replacement and the torn ligaments healed sufficiently to keep it in place. I see some of these old patients occasionally now for other complaints and without exception they report that their backs are still giving them trouble, although the sciatica has disappeared completely.

Before leaving the subject of conservative treatment, let me mention one other procedure which has been employed by my associate, Dr. R. B. Stith, in several cases where we had made the diagnosis of ruptured disk. It was used in those cases who either refused surgery, who could not afford surgery, or who were suffering so intensely that something had to be done to relieve them while arrangements were being completed to get them operated on. I refer to the injection into the epidural space of physiologic sodium chloride solution. This space is entered at the superior sacral foramen just above the sacrococcygeal articulation with an ordinary lumbar puncture needle. Through this 50 cc. of half percent novocain solution is introduced and then salt solution is injected, usually under considerable pressure, until a total volume of fluid amounting to 80 to 100 cc. has been employed. Intense accentuation of the sciatic pain accompanies the injection but within twenty-four hours there is frequently astonishing relief from pain. If the first injection produces no results, a second and a third may be tried at forty-eight hour intervals. Why this works as well

as it does is somewhat of a puzzle unless the intense pressure exerted by the incoming fluid dislodges the nerve from its position in contact with the herniated portion of the disk. I am not advocating this as a cure for rupture of the disk; it is merely a rather effective stop-gap—so effective that afterward it may be hard to persuade the patient that he still needs operation.

On the whole, conservative treatment, with the possible exception I have mentioned, holds out little hope of relief in those cases of suddenly developing low back pain associated with sciatica. Not only is it usually unprofitable but it can be actually harmful. The very first case of this kind which I finally recognized was studied over a period of several weeks so deliberately and so many temporizing and ineffective methods used that by the time she came to surgery, the fifth lumbar nerve had been incorporated inseparably into the nuclear material against which it had impinged and finally had to be sectioned. There is little excuse for failing to recognize the impressive symptoms and clear cut signs of a ruptured

intervertebral disk. Let any physician think back over his sciatica patients and he will most certainly find that the majority of them fit into this classification. The important thing to remember is that relief from this agonizing distress is now possible in a manner no less dramatic than its onset.

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Dr. James A. Babbitt, emeritus professor of clinical otolaryngology (diseases of the ear, nose and throat) at the University of Pennsylvania School of Medicine, and associate professor of otolaryngology in the university's graduate school of medicine, Philadelphia, was named president-elect of the American Academy of Ophthalmology and Otolaryngology at its annual meeting in Chicago, Wednesday night, October 22. Dr. Babbitt will take office January 1, 1943. The present president-elect is Dr. Ralph I. Lloyd, Brooklyn, who will assume office on January 1, 1942.

A novel and unique method of giving *blood transfusions* just behind combat lines was that devised by Dr. W. Dsbanowsky, who describes this method in a Russian medical journal published in the Ukraine, the *Radianska Meditzine*, No. 7-8, 1940, pages 78-79.

The method described is very simple and, after having transfused several hundred wounded on the battlefield, its application has been highly satisfactory.

A child's ordinary rubber ball is used, having the capacity for at least 500 cc. of fluid. A wire loop is made to fit around the ball in order to control this distension and thus its capacity. The diameter of this loop was previously measured. One or more

loops may be used depending upon the amount of blood to be transfused. A flexible rubber hose, two-way cock, and needles are all that is necessary. This material is previously sterilized and stored by wrapping in a sterile towel.

When giving a transfusion, the operator sucks through this apparatus 5 percent sodium citrate several times until all surfaces are well lubricated with the solution, keeping about 50 cc. in the bulb. The bulb is compressed allowing the air to be expelled through one opening of the petcock. The handle of the cock is then turned, preventing the return of air into the ball and permitting the expulsion of air from the tube. The needle is then inserted into the vein, the ball is lowered, and air is permitted to escape from the hose through the cock until the blood is seen, when the cock is turned permitting the blood to enter the bulb both from gravity and from suction produced by the expanding walls of the ball. When the ball has expanded to the capacity permitted by the wire loop, the cock is again turned, the needle is withdrawn, changed, and placed into the recipient. The ball is then elevated and the return of flow can be controlled both from gravity and by compression on the bulb. When all blood has entered the recipient the cock is turned, needle withdrawn, and apparatus cleaned and made ready for another transfusion.

THE JOURNAL

OF THE

South Carolina Medical Association

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Office of Publication: (In care of the Editor)
Subscription Price

Florence, S. C.
\$3.00 per Year

DECEMBER, 1941

P. A. S. P. D. V.

A new agency has been established, by Presidential order, which will play a vital part in the lives and work of physicians in the near future. The official name of the agency is the Procurement and Assignment Service for Physicians, Dentists, and Veterinarians, and its function will be to receive requests from various governmental and other agencies requiring professional personnel and to fill these needs through appropriate means. The entire program is predicated upon volunteering of service and the leaders of the profession who have been active in promoting the establishment of this agency believe that the physicians, dentists, and veterinarians of the United States will be more than willing to do whatever is asked of them, once they have been shown the need for their services. Should the program fail, however, it is highly probable that some form of compulsory measure will be adopted. The office is now being established and the details of the program are being worked out. Just what the modus operandi will be has not been determined, but it will probably follow some such course as this: The Army, finding a need for ten urologists, will make known its need to the Agency. Through the lists and records now at its disposal, the Agency will select the names of thirty or forty physicians who are qualified to serve and whose removal from their present location will not work untold hardship on their local communities. These men will be contacted regarding their

willingness to serve. From the list of those who signify their availability, ten names will be selected and sent to the Army. These men will then be called.

It can readily be seen that the success or failure of this plan will depend upon two things: the ability of the Agency to select physicians in such a way as to fill the need of National Defense without impairing the medical needs of the civilian population, and the willingness of physicians to volunteer services when the occasion demands. The personnel of the Agency (Drs. Frank Lahey, Harold S. Diehl, James E. Paullin, Harvey S. Stone, and C. W. Camalier, Jr.) and the methods adopted to date speak well for the technical part of the program. The big question now is—will physicians, the country over, volunteer their services when the time comes?

The history of medicine in this country shows that physicians have always been ready to volunteer their services in times of emergency—and we believe that the present emergency will be no exception. Show the average physician the place where the need is the greatest and his love of country plus medicine's great tradition of serving others will cause him to proffer his services gladly and immediately. To be sure, there are those whose love of self is so much greater than love for country or for fellowman that they will refuse to budge from their present locations under any circumstances, but their number is not large. The vast majority of physicians are ready to go if the need arises.

Once again, the physicians of this country are on trial. Knowing these physicians for what they are, men who place service to others above selfish interests, we are confident of the stand which they will take. They will be weighed and found not wanting.

THE SULFONAMIDES

Where medical men are gathered together there sulfonamides are discussed and the recent meeting of the Southern Medical Association was no exception to this rule.

From the wealth of material which was presented certain conclusions may be drawn.

1. The sulfonamides are here to stay and are of ever growing importance to the physician in practice.

2. The most popular member of the group at the present time appears to be sulfathiazole although sulfadiazine will probably usurp this position as soon as the cost of the drug has diminished sufficiently to meet the requirements of the average pocket-book.

3. When given, the sulfonamides should be given in adequate dosage. Small doses do not prevent the reactions which occasionally occur and may prove harmful in that the patient

does not receive the benefit of the drug when he needs it most.

4. Sulfathiazole and sulfanilamide are absorbed and excreted more rapidly than is sulfadiazine. For this reason the first two drugs should be given at four hour intervals day and night while sulfadiazine may be given every six hours.

5. The initial dose of the drug should be a large one, approximately three times as large as the subsequent regular doses.

6. The sulfonamides are of value externally as well as internally and are beneficial in the form of ointments for superficial infections, in the form of powder crystals for contaminated wounds, and in the form of a spray for treating burns.

7. The sulfonamides, particularly sulfanilamide, are of value in the treating of peritonitis when introduced in crystalline form directly into the peritoneal cavity.

8. Sulfathiazole and sulfaguanidine, particularly the latter, have been found to be almost specific in the treatment of bacillary dysentery.

9. The sulfonamides are of great value in preventing spread of severe upper respiratory infections to the sinuses, the ears and the mastoids.

Human plasma and serum are coming to the fore more and more and a brief summary concerning their usage is presented by L. R. Newhouser and D. B. Kendrick, in the United States Naval Medical Bulletin (October, 1941).

"Blood plasma and serum are the therapeutic agents of choice for the emergency treatment of traumatic shock, hemorrhage, burns, and other conditions in which fluid and electrolyte balance are altered.

"Human plasma has been found to be the most satisfactory fluid for the replacement of lost blood volume and the restoration of depleted blood proteins; these findings have made plasma transfusions a procedure of common practice. This does not mean that blood transfusions should be or can be abandoned. On the contrary, there is a definite place in the category for both blood and plasma.

"Plasma does offer certain advantages which are worthy of consideration. It can be used without

typing either donor or recipient, may be stored for many months in the liquid, frozen, or dried state and then administered safely. Long distance transportation does not alter its normal constituents. It can be made available for instant use and when injected it does not tend to increase the concentration of red blood cells in cases of shock and burns when hemoconcentration is already present.

"Plasma and serum differ in composition and methods of processing. Plasma is the supernatant fluid which separates from the cellular elements when an anticoagulant is added to blood. Serum is the liquid portion of blood which separates when blood clots. Plasma contains albumin, globulins, and fibrinogen. In serum the fibrinogen has been removed in the process of clotting. The relative merits of plasma and serum have provoked a great deal of controversy but it may be said that when properly prepared both serum and plasma produce results which are quite comparable."

HISTORICAL SIDELIGHTS

A SKETCH OF MEDICINE IN SOUTH CAROLINA 1670-1700

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In the spring of 1670, there arrived at a point of land on the Kiawah River in the sprawling land of Carolina, a party of English and Barbadian colonists, who succeeded in establishing the village of Charles Town, the beginning of the present State of South Carolina. With them came the rudiments of English medical knowledge, and among them were, perhaps, some few persons who had more or less skill in the practice of medicine.

These people came from a country but recently freed of the horrors of the Great Plague, and afflicted to a degree with "intermittent fevers" and other communicable ailments, which must have left some impress on the emigrants. Whatever physical disorders they may have brought along had very likely been aggravated by the hardships of tedious voyages. They were fortunate in that they encountered no new variety of sickness among the natives, but even so, the need for a well-trained physician was obvious but unfilled in a colony far from all other source of medical help.

The competent English physician of the day was possessed of a reasonably broad knowledge, for medicine had accomplished much in the years preceding the settlement of Carolina. Before the turn of the century, anatomy and surgery especially had acquired new momentum. Medicine everywhere was still much under the spell of the dull authority of the ancients, but showed some signs of heeding the spirited exhortations of Paracelsus that physicians abandon Galen, think for themselves, disregard the noisome polypharmacy of the day and turn to the new chemical knowledge. Francis Bacon and Descartes had emphasized

the way to scientific study as the times improved and social reforms were instituted. Harvey had patiently produced his revolutionary theory of the circulation of the blood, and Van Helmont had built noble systems on a knowledge of the chemical processes of the body. Malpighi had illuminated a budding histology. Sydenham had arisen as a great clinician and by keen bedside observation, had shed needed light on many confusing diseases. Thomas Willis had opened roads to more reasonable therapy. Obstetrics as practiced by the man-midwife had attained respectability at the very time that the Carolina colonists were landing in America, for Julien Clement delivered Madame de Montespan at the French Court in 1670 and set a fashion which quickly spread to England. The microscope was revealing unsuspected worlds and a new science was sprouting from its lenses. From these new beginnings, valuable speculation was about to develop and flower¹.

The prevalent recognized epidemic diseases in England of the time were many, and the current reputable remedies were relatively few, but definitely drastic. Plague, malaria, dysentery and typhus were familiar visitors. Physicians leaned more to the abundant use of bleeding, purging, and blistering, than to Sydenham's faith in the *vis medicatrix naturae*. Cinchona, ipecac, mercury and antimony were held in high repute, and given in large doses. Many a local Dr. Sangrado reduced his patients to the point of exsanguination. The clyster was a favorite remedy for various ills. Smallpox inoculation was not yet generally known, and preventive medicine was still in large part a vague theory. Despite the contributions of Pare', surgery as practiced by the best men of the time was still crude and dangerous.

The story of medicine and its practitioners of the very earliest days of Charles Town is scanty and unsatisfactory. Men came to the new colony in search of a refuge or a fortune, to trade or to explore, rather than to carry

(Prepared under the direction of the Committee on Historical Medicine of the South Carolina Medical Association.)

on the practice of a profession which they had adopted in another country.

The glowing stories of the virtues of the Carolina climate, as described by the press agents of the Lords Proprietors, were certainly not such as would attract physicians seeking extensive practices. In an account published in London in 1682², one of these writers says of the remedies and diseases of the new country:

"The air of so serene and excellent a temper, that the Indian natives prolong their days to the extremity of Old Age—and where the English hitherto have found no Distemper either Epidemical or Mortal, but what have had their Rise from Excess or Origine from Intemperance. In July and August they have sometimes touches of Agues and Fevers, but not violent, of short continuance, and never Fatal. English children there born, are commonly strong and lusty, of sound constitutions, and fresh ruddy complexions."

Speaking of the herbs of the colony, he mentions a "variety of such whose Medicinal Vertues were rare and admirable. The China grows plentifully there, whose Root yields us that pleasant Drink which we know by the Name of China Ale in England: In Medicinal uses it's far more excellent. . . . It mundifies and sweetens the Blood. It's good in Fevers, Scurvy, Gonorrhea, and Lues Venerea. They have three sorts of the Rattle-Snake Root which I have seen: the Comous, or Hairy, the Smooth, the Nodous, or Knotted Root: All of which are lactiferous, or yielding a Milkie Juice. They are Sovereign against the Mortal Bite of that Snake, too frequent in the West Indies. In all Pestilential Distempers, as Plague, Small Pox, and Malignant Fevers it's a Nobel Specifick; when stung, they eat the Root, applying it to the venomous Wound: or they boyl the Roots in Water; which drunk fortifies and corroborates the Heart, exciting strong and generous sweats; by which endangered nature is relieved; and the Poyson carried off and expelled." He describes the Sea-Cow, and affirms that "It hath a stone in the Head which is a gallant Remedy against the Pains and Dolor of the Stone; so are the Bones of its

Body to provoke Urine, when pulverized and exhibited in convenient Liquors."

Another enthusiastic writer³ says that "Such, who in this Country have seated themselves near great marshes are subject to Agues . . . etc; divers Persons who went out of England Pñsical and consumptive, have recovered, and others, subject in England to frequent fits of Stone, have been absolutely freed from them after they have been there a short time; nor is the Gout there, yet known. The air gives a strong appetite and quick digestion; nor is it without suitable effects; men finding themselves apparently more lightsome more prone, and more able to all youthful Exercises than in England; the Women are very fruitful and the children have fresh sanguine complexions." Even the present day exponent of California or Florida could promise no more.

Stephen Bull, an early settler, wrote in 1670⁴—"wee conceive this to be as healthfull A place as ever was settled wee have lost but fower p'sons since wee satt down heere, & those was sickly p'sons & in A declininge condition of health before wee landed there is some p'sons that have had feaver and Ague butt we observe little mortality in the distemper neither is the distemper neere soe high as is usuall in other Places . . . May itt please yor Honor our govrnor is ill of the feavr & Ague & being aged & falen into A relapse I doe much feare his recover." Another correspondent⁵ wrote that the colony lacked nothing except "cattle, company, and good liquor." Thus disease was of minor concern to colonists who were in constant acute fear of a Spanish invasion, though shortly after this time Governor West wrote⁶ "Here is wanting amongst us a good Doctor, and a chest of good medicines, those few people yt have dyed amongst us, I believe most part for want of good lookeing after, & that weh is fitt for men: Wee have not (thankes be to God) had one dyed out of our ffamily since wee came ashore which I looke upon as a very great ffavour from God: Ou Servants have bene sickly as well as others but now they are indifferently healthfull, and I hope season'd to the Country . . . wee find that one of our Servts we brought out of England is worth 2 of ye barbadians,

for they are soe much addicted to Rum, yt they will doe little but whilst the bottle is at their nose."

In 1672 the settlement at Charles Town had grown from its original handful to about 500 people. By 1680, it had grown to about 1200, as the Huguenots and Barbadians began to arrive, and by 1682, it included nearly 4000 souls. In 1684, there appeared the first notable general sickness, an epidemic of a disease which was probably malaria arising from cases imported among the settlers. Discouraged by this event, and ignorant of its cause, the Proprietors wrote⁷ in June, 1684 "We are by all people informed yt Charles towne is no healthy scituation and yt it hath no good Water in it and all people that come to the province and landing there & the most falling sick it brings a Disreputation upon the whole Country wherefore wee desire that you will cause some other place to bee Searched out upon Cooper River nere the T to build a port towne on for that River & let it be Reserved for that Use until you have informed us of it & Received our opinion thereon." and later the settlers arriving from Scotland in October reported⁸ "We found the place so extrordinerie sicklie that sickness quickly seased many of our number and took away great many of our number and discouraged others, insomuch that they deserted us when we wer to come to this place (Port Royal) and sold of their servants . . . We came here the beginning of November, sicklie as we wer, we most confess the countrie is verie pleasant and desirable and promiset h well enough, better by far than any other place in Carolina that we had occasione to see. We settled ourselves altogether in a verie convenient place for a town being about twentie miles from the mouth of the river Port Royall . . free of swamps and marshes, a high bloffe land excellently weell watered, of such wholesome air as many of us quickly recovered, and none have contracted sickness since we came tho many died of the sickness they contracted at Charlestoun at our first arravell."

Shortly afterward, a ship from Londonderry touched at Port Royal and lost twenty-nine persons because of sickness contracted there⁹. Some years later, a dismal account of the

Carolina country said that "Two young men have just arrived from Carolina, who give some news of the country. In the first place, they say that they have never seen so miserable a country nor an air so unhealthful. They have fevers all year long from which those attacked seldom recover; that, if some escape, they become all tawny as are these two who have arrived, who are pitiable to behold. Moreover, the heat there is so intense that it is almost unbearable, and this infects the water, and in consequence diseases are caused, there being no other drink there. They also bring tidings that, before their departure, a vessel came from London with 130 persons, including the crew, of whom 115 are dead, all from malignant fevers which spread among them."

In the face of these unfortunate developments, immigration declined and progress of the colony was much retarded. We may believe that such physicians as were at Charles Town were in great demand, and that their efforts may have been successful in saving many who otherwise might have succumbed to the deadly infection. There is nothing to show that these physicians used cinchona; although it was at that time a long established remedy for malaria, it may well have been unavailable to these provincial doctors.

Of the medical activities of the earliest physicians of Carolina, very little is known. Henry Woodward was the most distinguished by virtue of an adventurous career. Coming out with the early expedition to Port Royall in 1666, he was left as a guest among the Indians and established himself with them so securely that his influence was extremely valuable when later difficulties arose. Afterwards captured by the Spaniards and taken to St. Augustine, he escaped when Searle the buccaneer assaulted that town, and thereafter shipped as surgeon aboard a privateer. Having been shipwrecked on Nevis, he joined the first colonists when they touched there on their way to Carolina, and settled with them at Charles Town. Later he was accused of helping the Westo Indians to war against the settlers, and went to England, where he was fully acquitted of the charge. He was immensely valuable to the colony in dealing with the

natives, and was a man of recognized importance in all local affairs. We may assume that he exercised his surgical art upon both settlers and natives, but no record supports such assumption.

Of other medical men, little remains except a few names and dates. Dr. Will Scrivener, deputy for Lord Berkeley, was active in local politics and died in 1671. "Doctor Tho: Smyth," the Landgrave, is mentioned as an early arrival¹¹ and he made a will bequeathing "all my instruments that belong to Chirurgery and one half of all my medicines—alsoe my large brass mortar and pestle"¹² to his son George Smith, who is said to have taken a medical degree at Edinburgh in 1700 at the age of 28 years. George Smith afterward lived for many years at Goose Creek and is also said to be the first permanent resident of Carolina to obtain a degree from a college.

Dr. William Clarke¹³ and Dr. Peter Bodett¹⁴ arrived before 1678. Clarke styled himself "Chirurgion" in his will, and was possibly the first real practitioner in Charles Town. Bodett lived on Goose Creek. Joseph Blake, a surgeon, probably was not very active in his profession, but devoted himself to political and economic matters, as did his friend James Williams, another surgeon who settled in Colleton County about 1683. In Berkeley County, Dr. Charles Burnham¹⁵, a New England Quaker, was prominent in politics, if not in medicine. Dr. John Hardy was a man of large holdings, having three thousand acres in a grant" In the troublous administration of James Colleton, 1686-1690, Hardy became involved in disputes with the Governor, and, when the latter proclaimed martial law in 1689, the doctor decided to quit the country. According to a partisan of Colleton's, Hardy left pending a suit against the latter for £150 'For Phisick and as a phisitian and for some small merchandise.' " The Governor brought a counter suit, and, "It was proven by concurring proofs that the Gov and his lady gave him (Hardy) 10 lib in gold as a reward for his attendance as phisitian. . . it ended in Hardye's being 7 pund in the Gov Debt."¹⁶ Although Colleton's arbitrary rule was quickly brought to an end, Dr. Hardy probably did not return

to South Carolina. In the power of attorney, which he executed before leaving, he is described as a "phisitian," and he was probably a doctor of medicine.

Of Doctor William Trevellian¹⁷, little is known beyond the fact that he was in the Province during the sickness of 1684. The two Smiths, Woodward, Clark, Bodett, Blake, Williams, Burnham, Hardy and Travellian, ten in all, were the only medical men who are known to have been on hand during the epidemic. By that time, the colony probably contained in the neighborhood of six thousand inhabitants, exclusive of the Indians living in the settlements. Hence, even if there were ten or a dozen practitioners besides those whose presence is recorded (which is unlikely) few people could have enjoyed the personal attention of a doctor. The majority, particularly in the country, must have depended on home remedies and the dubious help of neighbors with local reputation for some knowledge of physic. This condition was common enough in Europe at that time, and indeed is not unknown in many parts of our own country at the present day.

While systematic medical activity before 1700 is not evident, there is some sign of a developing local interest in health and disease in the form of various acts passed for the benefit of the sick and unfortunate. In 1695, an act for registering birth, deaths, and marriages was passed. In 1696, the Vestry of St. Philip's Parish was authorized to raise funds for the care of the sick. In 1698, it was ordered "yt Mr Jonathan Amory Receiver Do Pay Doctr Georg ffrankline out of ye Publick Money Twenty fower Dollas in full for medicines and attendance on a Poore wounded Seaman." He was also ordered to pay Mrs. Williams and Mr. Burroughs "the Sume of Eighteene Dollars for six-weekes Dyett and Nursing a Poore Miserable wounded man—again 30 dollars for 8 weeks diet and nursing "as allsoe for ye Burriall of a Poore wounded Seaman."¹⁸ Franklin was an apothecary who arrived in 1686 and later returned to England. Some of the specimens of Carolina products which he sent home eventually became a part of the British Museum.

After the epidemic of 1684, the colonists remained free of serious disease until a catastrophic wave of yellow fever appeared in 1699. McCrady¹⁹ says "a malignant disease, with little doubt yellow fever, was brought in from the West Indies and raged in the town. In a letter from the Governor and Council, dated Charles Town in South Carolina, January 17, 1699-1700, they state that they had nothing to communicate but that a most infectious pestilential and mortal distemper (the same which hath always been in one or more of his Majestys American plantations for eight or nine years last past) which from Barbados or Providence was brought in among us into Charles Town about the 28th or 29th of Aug. last past, and the decay of trade and mutations of your Lordships public officers occasioned thereby. This distemper from the time of its beginning aforesaid to the first day of November killed in Charles Town at least 160 persons. . . . Besides those have died in Charles Town 10 or 11 have died in the country, all of which got the distemper and were infected in Charles Town went home to their families and died; and what is notable not one of their families was infected by them."

Another letter states that "150 persons had died in Charles Town in a few days;" that "the survivors fled into the country" and "that the town was thinned to a very few people."

It is noticeable that Chief Justice Bohun, the Rev. Samuel Marshall, the Receiver General Ely, and Edward Rawlins, all newly arrived, fell victims to the disease. But the old settlers were not exempt. Half of the members of the Assembly died. Nicholas Trott, the Attorney General, though a new arrival, escaped. Dr. Ramsay, who wrote many years later in 1809, observes 'this disease was generally called the plague by the inhabitants, but that from tradition and the circumstances, particularly the contemporaneous existence of the yellow fever in Philadelphia, there is reason to believe that the malady was the yellow fever, and if so, it was the first appearance of that disorder in Charles Town and took place in the nineteenth or twentieth year after it began to be built. He considers that its reap-

pearance in 1703 makes it still more probable that it was the yellow fever.' Here was a disease unfamiliar to Europeans and full of danger in that no one knew how it spread or how to treat it."

Occasional mention of names and activities indicates that a reasonably large number of physicians were in the province before 1700. Dr. Isaac Porcher, Huguenot refugee, came to Carolina in 1696 and lived at the Santee settlement, later on Goose Creek and Wasamassaw. He became a prominent citizen. John (Jean) Thomas, a Huguenot, appears in the Journal of the Grand Council for 1692—in connection with what may be the first autopsy in Carolina—"Petition of John Thomas, Chyrugen, against Mr Jonathan Amory and Mr. George Dearsley admirs of Mr. Wilson Dunston Deced for five pounds for opening the said Dunston after the disease (It was ordered that Amory and Dearsley) pay the said John Thomas fifty shillings for inspecting the said Dunston's wound after his death as alsoe for this visitt and advice in his Life time." One of Dr. Thomas' patients wrote of him as "the only Pson that deserves the Name of a Phisician in this place" (Charles Town), but later the same patient, disappointed in his hope of improvement, wrote that the best of the doctors in the town had "originally been no more than Barbers."²⁰

Antoine Cordes of Berkeley County, like his compatriot Isaac Porcher, was said to be a doctor of the University of Paris; both signed documents describing them as surgeons. These two, and Joseph Marboeuf de la Bruce, an apothecary, settled eventually in Craven county. Daniel Brabant was another Huguenot surgeon, but of his surgical doings there is no record.

William Sallmon "Doctor of Physicke" bought land of Landgrave Smith (1684-5). James Williams lived on the Wadmalaw. Nathaniel Snow, Chirurgeon, who lived at Goose Creek, witnessed a will in 1700 and for his efforts with the patient was to be paid his "charges for burying of him, his medicines truble dyett skill and time."²¹ Dr. Atkin Williamson is mentioned in a will dated 1697; Dr. Thomas Tode is similarly noted in 1697.

In 1692, Richard Newton, "a privateer shipp's surgeon having given parole, escaped from Charlestown but was driven back." Thomas Napper, Chyrurgeon of Johns Island in Carolina, is heard of in 1685. Dr. Jacob Burdell helped to appraise an estate in 1694. Dr. Henry Bolt appeared in a document of 1699. Robert Adams, "Physition," had his will proved in 1697. Dr. William Harris survives only as a name. No doubt many others are buried in obscurity; certainly little survives of their medical exploits.

Thus for its first thirty years, the struggling Carolina colony can scarcely be shown to have contributed much to the development of medicine in America. Such pioneer medical men as were in and about Charles Town before 1700 were probably occupied with many things beside the practice of medicine, and no account of any contributions by them either to the art or to the science of their profession has been unearthed. As the settlements became more stabilized, more prosperous, and more populous, the eighteenth century brought in a setting for the brilliant group of physicians who were to bring to Carolina a national and even an international reputation for medical excellence. Lining, Chalmers, Garden, Dale, the Moultries, Killpatrick, and others, were to flourish soon in a colony which was fast reaching an important place in the development of America.

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A romantic account of Henry Woodward's career is to be found in "Hilton Head" by Josephine Pinckney—Farrar & Rhinehart, New York—1941.
- The author has derived much assistance in preparing this paper from St. Julien Child's—Malaria and Colonization in the Carolina Low Country 1526-1696—Baltimore—The John's Hopkins Press 1940.

It is thought by many that *sulfadiazine* will soon become the most widely used of the sulfonamide drugs. The present status of our knowledge concerning this drug is well summarized by William J. Doyle in the September, 1941 issue of the Rhode Island Medical Journal.

"1. Sulfadiazine has proved less toxic than the other sulfonamides in animal experiments and is at least as effective in experimental infections.

2. Sulfadiazine is readily absorbed from the gastrointestinal tract in man and high blood levels are easily obtained.

3. The excretion of this drug is slower than that of the others and conjugation occurs to a lesser extent.

4. Sulfadiazine penetrates into the spinal fluid and other body fluids in effective concentrations.

5. The common toxic symptoms occurring with other sulfonamides have also occurred with sulfadiazine but are noticeably less frequent and less severe.

6. Clinical use in nearly 500 cases has shown it to be remarkably effective in pneumococcic, streptococcic, staphylococcic, and meningococcic infections. It also gives promise of being useful in other conditions.

Sulfadiazine is, then, another important step toward the production of chemotherapeutic agents that will fulfill Ehrlich's ideal."

PRACTITIONER'S PAGE

This page is devoted to the everyday problems of the physician in practice. Members of the Association are urged to suggest subjects for articles which they desire discussed. Members are also urged to submit questions. Each question will be referred to some physician who is qualified to make answer, and if the question involves a subject of general interest, the answer will be printed.

VITAMIN A

Roe E. Remington, Ph.D., D.Sc.

Professor of Nutrition

Medical College of the State of South Carolina

Although true vitamin A as found in fish liver oils is colorless, an orange-yellow substance found in green and yellow vegetables, and known as carotin, can be converted into vitamin A in the body. We usually associate carotin with carrots and other yellow vegetables such as sweet potatoes and yellow squash, but as a matter of fact a good many green leaves contain more carotin than carrots. In work with animals it was observed that deprivation of vitamin A caused cessation of growth and later inflammation and ulceration of the conjunctiva and cornea, i. e. xerophthalmia. This condition has been seen in children. More recent is the discovery that an early manifestation of deficiency in man is impaired sensitivity to dim light, due to deficiency in rhodopsin or visual purple. However, sub-normal dark adaptation can be caused by factors other than vitamin A deficiency, as for example by lack of oxygen.

Instruments for measuring ability to respond to changes in light intensity have been devised and are being used. Another possible test for adequacy of vitamin A nutrition is the measurement of the vitamin A and carotin content of blood plasma. Low values point to inadequate supply. Infection causes a prompt and considerable fall in both plasma carotin and vitamin A, but after the temperature returns to normal these values increase again and there may even be a temporary excess. Serum vitamin A is low in chronic malignancies, in tuberculosis, and in Graves' Disease. It is not affected in colloid goiter, and tends to be high in lipemia including the lipemia of diabetes.

The rather prevalent belief that vitamin A

protects against infections seems to be based on the observation that prolonged deficiency causes atrophy and keratinization of the epithelial tissues which line the cavities of the body, and hence lowered resistance to the entrance of micro-organisms. Experiments on feeding cod liver oil to persons on uncontrolled diets have not shown marked increase in resistance to the common cold, and it is improbable that better resistance to such infections can be expected through administration of vitamin A unless there has been tissue injury due to its lack.

The mechanism of the conversion of carotin to vitamin A in the body is not understood, but since in liver damage vitamin A improves dark adaptation where it was previously deficient, but carotin does not, it seems probable that this change takes place in the liver. Hence it is quite possible that cases will be found which will respond to fish liver oils but not to carotin.

The daily standard allowance for adequate nutrition has been set at 5,000 USP units for adults, increased to 6,000 in pregnancy and 8,000 in lactation. For children 1500 units is recommended for the first year of life, increasing to 5,000 at age thirteen. Thin leaved green plants which are used as food are abundantly supplied with carotin. Egg yolk and liver are excellent sources, containing both vitamin A and carotin. Stimulated by the lack of Norwegian cod liver oil, research has found that liver oils from other varieties of fish are as high, and some of them higher in vitamin A potency, than cod liver oil.

For normal nutrition, there seem to be a goodly variety of food sources without recourse to medicinal preparations. For therapeutic use, liver oils of halibut, ling, mackerel, salmon, shark, and tuna, can replace cod liver oil if need be.

Pathological Conference, Medical College of the State of South Carolina

KENNETH M. LYNCH, M. D., PROFESSOR OF PATHOLOGY

Case of Dr. D. B. Remsen

ABSTRACT NO. 444

Present illness: 43 year old negro man employed as chef in hotel, admitted in June, 1941 with chief complaint of "pain in left chest which shoots through to back." Six weeks prior to admission felt a fullness in his chest and he decided to go to bed. While lying in bed he had intermittent pain in left chest, which did not increase on exertion and was most severe while resting quietly. Pain described as "cutting" and traveled through to left shoulder blade; radiated only to back; excruciating at times. Had first shortness of breath three weeks ago while lying in bed.

Past History: Patient in hospital in 1938 complaining of pain in left lumbar region, back and abdomen after lifting a heavy beam. Also had signs and symptoms of peripheral neuritis in forearms and gave history of having worked in paint factory in 1922 and 1923 mixing red and white lead. During this time he had dizzy headaches, trouble with his eyes and noted that the tips of his fingers got red and he would have cramps in his hands and difficulty in opening them; also loss of sensation on back of forearms and hands; pain in calf muscles. Remained about the same for five years prior to admission in 1938. History of G. C. in 1927 followed by burning and difficulty in urination. Blood Wassermann negative and Kline positive on this 1938 admission. Received three hip and one arm shot. Discharged improved.

Physical: T. 101. R. 86. BP. 140/50. R. 24.

Revealed a well developed and well nourished negro man, sitting up in bed and moderately ill and dyspneic. Skin and mucous membranes normal. Pupils react to L. & A. Ears, nose and mouth normal except for carious teeth. Lymph glands show some shotty general enlargement. Chest symmetrical and lungs resonant throughout; basal rales posteriorly. Mediastinum questionably widened. Heart enlarged to left of anterior axillary line. PMI 2 cm. outside MCL. To and fro friction rub synchronous with cardiac rhythm. Questionable diastolic murmur best heard at apex. No ascites. Liver down 2 lbs and slightly tender. Spleen not felt. No spasm or rigidity. Reflexes physiological.

Laboratory: Urinalysis (three times) showed occasional hyaline and fine granular casts. WBC varying from 3 to 30. One plus albumin on one occasion, no blood.

WBC ranged from 7,300 to 12,500; RBC around 3 million. Hb. from 7.5 to 8.5 gms; polys from 71 to 82%.

Blood Wassermann and Kline—Negative. Spinal Fluid Wassermann—negative; Kline—positive. Colloidal Gold—negative.

Two Blood Cultures positive for *Strep. viridans*.

Course: Temperature ranged from 99 to 103 with pulse from 90 to 130. Had several chills. Occasional sharp precordial pain. Friction rub became indistinct and to and from murmur replaced it. Definite diastolic murmur at apex which became very distinct at base also. Complained of sticking pain in right arm together with numbness and radial pulse disappeared; also developed anesthesia of anterior surface of right thigh from the knee upward for about 8 cm. Coughed up blood-tinged sputum. Became more dyspneic with more rales in lungs and expired about one month after admission.

Student G. M. Mood, Jr. (Presenting): We have an interesting case presenting a number of varied clinical findings. His blood pressure varied from 126/42 to 140/50. In 1938 he had symptoms of back strain and complained of peripheral weakness and paresthesias. A diastolic murmur was also heard at that time and his blood pressure was 140/68. On his last admission his mediastinum was widened to X-ray and it was noted during his course in the hospital that the friction rub changed in quality and the diastolic murmur became more definite. His sedimentation rate was 24 mm/hr. In the progress notes of this last entry a purpuric spot was described in the bulbar conjunctiva eight days after he entered the hospital. A pistol shot was heard over the peripheral arteries. All other information is recorded on the protocol.

Dr. Kelley (Conducting): Mr. Cobb, would you like to tell us the disease that was the cause of this man's death?

Student Cobb: In 1938 the pain of which he complained was most likely due to some form of back strain.

The peripheral neuritis, dizziness, cramps and reddening of the finger tips sounds like some form of lead intoxication, particularly since we know such a hazard was possible due to his occupation. I do not believe that gonorrhea has anything to do with his present illness. I do think, however, that the serology does have a very important bearing. From the facts that we have at hand, I think he had subacute bacterial endocarditis. If we had an adequate history of his serology and the amount of treatment he had received we would be more able to judge whether or not he had syphilis. The generalized enlargement of the lymph nodes fall in line with some form of luetic infection. Subacute

bacterial endocarditis is usually superimposed on a damaged valve. The purpuric spot in the conjunctiva points to embolic phenomena, whereas the chest pain traveling to the left shoulder is in keeping with a pericarditis.

Dr. Kelley: Is pericarditis usually a painful affliction?

Student Cobb: I believe it can cause pain referred to the shoulder region. Of course, the pain could have been anginal in nature.

Dr. Kelley: Then you think endocarditis killed him?

Student Cobb: Yes, indirectly. I think a pulmonary embolus killed him.

Dr. Kelley: Do you think he had any other disease besides subacute bacterial endocarditis?

Student Cobb: The serology is a crucial factor there. He certainly had signs of aortic insufficiency. Believe that he must have had syphilis, but at the time he died I think he had subacute bacterial endocarditis.

Dr. Kelley: Do you believe the subacute bacterial endocarditis was grafted on an old lesion?

Student Cobb: Yes, I think it was superimposed on an old injury, probably syphilitic involvement of the aortic valve.

Dr. Kelley: What was basis of embolus?

Student Cobb: I think fragment of vegetation broke off and went to the lungs; probably a portion also went to the radial artery.

Dr. Kelley: Mr. Lee, do you see eye to eye with Mr. Cobb?

Student Lee: I can't agree with the pulmonary embolus, but otherwise I am of about the same opinion. I think he had subacute bacterial endocarditis, probably superimposed on syphilitic involvement of the heart.

Dr. Kelley: What do you think was the cause of death?

Student Lee: I think he died from congestive heart failure or coronary occlusion. The systolic blood pressure is rather high for congestive heart failure, but the rales, enlargement of the liver, edema and dyspnea are all part of the picture of congestive heart failure due to an incompetent valve, such as might be caused by syphilis with or without a superimposed subacute bacterial endocarditis. Narrowing of the coronary ostia by a syphilitic aortitis would give rise to anginal pains, and the fact that they were not related to exertion points to partial permanent occlusion. I don't believe pericarditis is painful unless it involves the adjacent pleura.

Dr. Kelley: Is there anything about this case that strikes you as being unusual?

Student Lee: I am unable to say; nothing particularly.

Dr. Kelley: Mr. Kerr, do you believe this man died of subacute bacterial endocarditis superimposed on cardiovascular syphilis?

Student Kerr: Yes, I do, these aforementioned conditions resulting in terminal congestive heart failure. This is an unusual combination, but it does occur.

Dr. Kelley: On what lesion is subacute bacterial endocarditis usually engrafted?

Student Kerr: Pneumonic and gonorrheal infections sometimes damage the heart valves so that their vitality is impaired and streptococci are then able to set up infection on these lesions.

Dr. Kelley: But what is the fundamental lesion, the most common and the worse one?

Student Kerr: I believe it is rheumatic heart disease, but I am not altogether sure.

Dr. Kelley: Mr. Lowe, will you put the X-ray films up and tell us what you see?

Student Lowe, (Presenting X-ray films): The heart appears definitely enlarged to the left and the aortic shadow appears widened. The lung fields show increased density as if from pneumonia or congestion. In the later films the heart appears even larger and the haziness in the lung bases appears to be definitely pneumonic.

I am not sure that the subacute bacterial endocarditis is superimposed on a syphilitic process, for the serology is usually positive in cases of cardiovascular syphilis. The most common lesion for an endocarditis to be superimposed upon is an old rheumatic valvulitis.

As regards the pericarditis, I do not believe it causes pain, unless the pleura is involved. Pericarditis with effusion will cause pain however.

Dr. Lynch: Dr. Cox will present the findings in the case, but I wish to say that I think an aneurysm of the thoracic aorta should have been mentioned as a source of the pain in the left shoulder region. I don't think it can be ignored, particularly from the clinical history alone.

Dr. Cox (Presenting heart): Syphilitic heart disease is quite common and subacute bacterial endocarditis is usually superimposed on a chronically diseased valve, usually either rheumatic or congenital. It is rare to have subacute bacterial endocarditis superimposed on a syphilitic process. We believe we have such a case here. The greatly enlarged and dilated heart weighs 800 gms. and its epicardial surfaces are roughened by adhesions. The aortic valve cusps show thickening of their free borders with widening of the commissures. The sinus of valsalva behind the right anterior aortic cusp shows aneurysmal outpouching and there is wrinkling of the intima and consistent atheromatous plaques. There are fairly firm, shaggy vegetations fastened to the right anterior and posterior cusps and the left anterior cusps is fragmented and torn due to the destructive inflammatory process. In addition there was a focal embolic glomerulonephritis and of course all the viscera showed marked chronic passive congestion. We were unable to explore the vessels and of the arms and legs, so the

clinical findings there cannot be elaborated upon.

Dr. Robert Wilson, Jr.: The students all seem to have been very fortunate today and to have "hit the jack-pot" of correct diagnoses as it were. I would like to say, however, that in the presence of a negative Wassermann, no demonstrable dilatation of the aorta, no history of adequate treatment and then the development of subacute bacterial endocarditis certainly points away from syphilis. Of course, we do not often see rheumatic aortic valvulitis alone in this part of the world, but syphilitic aortic valvulitis in the face of the facts that I have mentioned is indeed unusual. The serology of such patients with cardiovascular syphilis is usually positive and often remains so even after adequate therapy.

The following are some *accident prevention notes* from an article in *Modern Hospital*, May, 1941, p. 76. Have you—

Taught your personnel to report all worn or broken equipment?

Reminded your employees to turn on lights before entering dark rooms?

Prevented falls by insisting that all dropped leafy vegetables be picked up immediately?

Required that only one-half of the corridor be washed or waxed at a time?

Provided a portable sign on a stand, "Danger—floor being waxed"?

Furnished your laboratory workers with leather gloves to be used when handling laboratory animals?

Posted signs outside the operating room, warning of explosive gases in use?

Admonished your nurses not to discard surgical blades, razor blades, and needles with the soiled linen?

Advised your nurses and laboratory workers against storing bottles of alkalis and acids on shelves above eye level, or beyond reach?

Educated nurses in proper use of a towel and water when inserting glass tubing into rubber stoppers or tubing?

Taught porters to empty waste baskets by inverting them, instead of reaching into them with their hands?

Replaced worn stairs, or made them slip-proof with strips of carborundum?

Noticed how often accidents occur as a result of inattention to work?

For the Local Treatment of Acute Anterior Urethritis

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*Silver Picrate is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

Silver Picrate, Wyeth, has a convincing record of effectiveness as a local treatment for acute anterior urethritis caused by *Neisseria gonorrhoeae*.¹ An aqueous solution (0.5 percent) of silver picrate or water-soluble jelly (0.5 percent) are employed in the treatment.

1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," *Am. J. Syph., Gon. & Ven. Dis.*, 23, 201 (March), 1939.

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SOCIETY REPORTS

The annual meeting of the Fifth District Medical Association was held at Rock Hill, October 29th. Dr. V. P. Patterson of Chester, spoke on **Medical Problems Among the Chinese**; Dr. Perry Volpitto of the University of Georgia School of Medicine, presented a paper on **The Abuse of the Barbiturate Drugs**; Captain R. A. Radke of the Fourth Evacuation Hospital, discussed **Medical Problems of Army Maneuvers**; and Dr. Robert Greenblatt of Augusta, Georgia, discussed **Dysmenorrhea**.

The following officers were elected. President, Dr. C. A. West of Camden, Vice-president, Dr. A. B. Whitaker of Camden, Secretary-Treasurer, Dr. John Brewer of Kershaw. The 1942 meeting will be held in Camden.

Dr. Sol McLendon, South Carolina State Hospital, was the speaker for the November meeting of the Chester County Medical Society. At this meeting Dr. V. P. Patterson, Chief of Staff of Pryor Hospital, invited the members to be dinner guests of the Hospital at all future meetings.

The Greenwood County Medical Society met at the Greenwood Hospital, October 21. Dr. W. A. Simpson presented a case report showing a series of rather unusual complications incident to a ruptured appendix in a seven year old child with recovery.

Dr. W. A. Hart of Columbia, was the guest speaker at the October meeting of the Florence County Medical Society. His subject, **Ante-partum Hemorrhage**. Dr. George McCutchen of Columbia, was also present and spoke briefly on **The Use of Vitamin K in Surgery**.

At the regular meeting of the Medical Society of South Carolina, October 28th, the program was in charge of staff members of the Stark General Hospital. Colonel

Meister presided and presented the following program: Major Parker C. Hardin, **The Cod Liver Oil Treatment of Burns and Other Wounds**; Lt. Frederick J. Hughes, **Certain Aspects of Pulmonary Disease Among Army Troops**.

Dr. Julian M. Ruffin of Duke University, addressed the Greenville Medical Society on November 3rd, choosing as his subject **Diagnosis and Treatment of Ulcerative Diseases of the Colon**.

Dr. Mordecai Nachman of Greenville, also presented a paper, **The Management of Nephroptosis** with a case report.

Dr. George B. Eusterman of the Mayo Clinic, was the guest speaker at the November meeting of the Columbia Medical Society. Dr. Leon S. Bryan of Columbia, also spoke on **Acne Vulgaris**.

The Fourth District Medical Society held its annual meeting at Union. The guest speaker was Major W. W. Holmes, of Camp Croft, and his subject **Obscure Phenomena Referable to the Nose and Throat**.

The following officers were elected. President, Dr. H. T. Hames of Jonesville, Vice-President, Dr. George Wilkinson of Greenville, Secretary-Treasurer, Dr. J. A. Crooks of Greenville.

The Third District Medical Society met at the State Training School, Clinton, S. C., November 18, 1941, with Dr. F. K. Shealy presiding.

It was a thrilling sight to see a demonstration of the great work that Dr. B. O. Whitten and his staff are doing at this school. The children entertained the Society with music and dancing during the dinner. Especially appealing to all the doctors was a little girl of five who was the star of the entertainment. When one of the matrons was asked who the child was she gave her

name and said, "She is our pride and joy." It is a pity that all the doctors in the state are not able to see this great school and a demonstration of the work they are doing.

The scientific part of the program was a very able paper by Dr. C. J. Scurry, of Greenwood, on the **Surgical Treatment of Varicose Veins**. Dr. Hugh Smith of Greenville presented a discussion on **Acute Interstitial Pneumonitis** which is a comparatively newly recognized disease of the respiratory track. This discussion was most interesting and was enjoyed by the entire society.

Dr. Oren Moore, of Charlotte, entertained the Society with a most useful discussion of the **Minor Disorders of Pregnancy** with a lot of wit and humor interspersed. Among the minor disturbances taken up by Dr. Moore were: nausea, pyalism, mastitis, dental deficiencies, vaginitis, pruritis, pres-

sure pains, cystitis, pyelitis, and varicose veins.

The Society was invited to Newberry for the next meeting in the fall of 1942. Dr. Claude Sease was elected president and Dr. H. B. Senn was elected vice-president.

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BOOK REVIEWS

SYNOPSIS OF THE PREPARATION AND AFTERCARE OF SURGICAL PATIENTS

Ilgenfritz, Penick, Maes.

Published by C. V. Mosby Company of St. Louis,
1941

The subject of this book is one that has been long overlooked in surgical literature. It offers in a clear and abstracted manner the essentials in the care of surgical patients before and after operation. In spite of the fact that it is brief there seems to be no sacrifice of completeness. The composite knowledge of many clinics is included with adequate bibliographies for those wishing to pursue particular subjects further. It is to be recommended to all practitioners of surgery but particularly to internes and residents as a ready reference book.

The only criticism which can be directed toward this book is the fact that some of the knowledge contained in it is likely to be out moded in a short while and be no more valuable than yesterday's newspaper or the match with which we just lit our cigarette. This criticism is universal in medical texts. However, the progress in the care of surgical patients in the last thirty years has been in the direction of improved pre and postoperative care and progress is so rapid that what we consider as fact today may be myth tomorrow.

G. T. McC.

PROFESSIONAL ADJUSTMENTS

Gene Garrison, A. B., R. N.

C. V. Mosby Company, St. Louis

This little volume (less than 200 pages) is presented as a textbook for freshmen students in a school of nursing. It may seem strange, therefore, to have it reviewed in a medical journal of this type.

Such was the opinion of the reviewer until he began to browse through its pages. But as he read page after page, he was convinced that the book was one which might be read with profit by every physician who is in any way connected with the nursing profession and particularly with a school of nursing. It gives an unusual insight into what the leaders of the nursing profession hope for and expect of the student nurses of today. And this can be said with assurance—if the nurses who are in our training schools today will follow the suggestions and advice contained within the pages of this book, this country will ever be proud of those who call themselves Registered Nurses.

Convincingly written in a style which is easy to read, undertoned with a keen sense of humor, this small volume should serve well as a textbook in any

school of nursing and should, at the same, be welcomed by any physician as parallel reading.

The following quotations are selected at random and might well serve as good advice for those for whom the book was not written—the physicians themselves:

"Never talk about yourself to the patients. After all, they are not interested in you and your affairs."

"The doctor of today does not expect the student to be a piece of machinery, however expert. He wants her to be a thinking, reasoning human being, who can help him in his work, who can observe, and properly interpret what she sees."

"The student who is not honest fails in playing fair. If she wastes or destroys hospital property; if she uses a hospital towel to polish her shoes; if she appropriates the belongings of her schoolmates; if she fails to turn off lights when they are no longer needed; if the student does such things, she is as dishonest as the man or woman who robs a bank."

"There is nothing more pleasing than the sight of a group of nurses, student or graduate, dressed in uniforms that are neat and clean. There is no more unpleasant sight than a nurse in a uniform that is soiled and ragged."

"There is no place in which good breeding or its lack shows up more clearly than at the table."

"No student should ever let herself become so narrow minded, so embedded in a rut, that she can talk nothing but shop. Even the lowliest patient on the ward would best be left in her bed when the student goes to lunch."

"Patients are people, not things. The student should never permit herself to become mechanical."

"In the last analysis, every principle needed in a code of ethics may be found in the statement that the nurse should always act for the good of her patient."

"There is no justification in telling falsehoods to little children about anything. They are certain to find you out."

"Attainment is never inherited."

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NEWS ITEMS

The *Southern Medical Association* was well represented by South Carolina physicians.

The following men presented original papers: Drs. William H. Kelley, Charleston, S. C.; J. Richard Allison, Columbia, S. C.; Ben Wyman, Columbia, S. C.; and Julian P. Price, Florence, S. C.

Among those taking part in the discussion of the regular papers were Drs. J. Warren White of Greenville, Ruskin G. Anderson of Spartanburg, J. W. Jervey, Jr., of Greenville, and C. L. Guyton of Columbia.

Dr. William Weston, Jr. of Columbia served as Secretary of the Pediatric Section and was re-elected to that office.

In addition to the above the following men from South Carolina were registered as attending: Drs. J. M. Davis, Columbia; Jas. S. Fouche, Columbia; Donald E. Michie, Marion, Robert E. Seibels, Columbia; Wm. A. Strickland, Westminster; Martin B. Woodward, Columbia; Martin D. Young, Columbia; H. G. Callison, Columbia; Roy L. Cashwell, Greenville; C. P. Corn, Greenville; J. R. Dunn, Sumter; J. W. Jervey, Greenville; T. R. Littlejohn, Sumter; G. S. T. Peebles, Columbia; W. H. Poston, Pamplico; A. M. Scarborough, Greenville; G. M. Truluck, Orangeburg; F. E. Zemp, Columbia; J. Fred Crow, Spartanburg; J. A. Hayne, Columbia; G. E. McDaniel, Columbia; Hilla Sheriff, Columbia; Sedgwick Simons, Columbia.

Friends of Dr. Randolph Jones, Surgeon of Duke Medical School were shocked to hear of the tragedy which resulted in his violent death on November 18th. The many friends of Dr. Jones in South Carolina sympathize with his wife and child and with the University with which he was connected, in his sudden passing.

Dr. W. L. A. Wellbrock, formerly with the Bradford Hospital, Bradford, Pa., is now with the United States Naval Hospital, Quantico, Va.

Dr. George Durst, who is now stationed at Fort Jackson, was in Greenwood recently for a short visit.

Dr. Hugh Cathcart has been transferred from Indiantown Gap, Pa. to Walter Reed Hospital, Washington, D. C.

The secretary of the Kershaw Medical Society has announced the establishment in Kershaw County of a Public Health Clinic for contraception and child spacing program for those individuals where regulation of pregnancies or prevention of pregnancies is thought necessary.

Dr. W. E. Saye has recently opened an office for the general practice of medicine at 1515 Bull Street, Columbia. For the past few years Dr. Saye has been connected with the Veterans Hospital.

Dr. and Mrs. James O'Hear, of 11 Franklin street, were forced to spend a night on Bird's key without food or shelter because a rolling sea made impossible a return trip in their small motor boat.

Dr. and Mrs. O'Hear left from Mount Pleasant on a fishing trip in a rented boat. The high winds caught them on Bird's key and although the tiny island is located above high water level, the couple was unable to reach the mainland again until the next morning.

"The fish were biting nicely," said Dr. O'Hear, "and I caught several large ones. But before we knew it we were marooned, the winds got stronger and stronger, and the sea rougher."

Fortunately there was a large palmetto log on the island and the doctor said he dug in one side to make a shelter to protect them from the wind.

"What a night," said Dr. O'Hear. "We got full of sand. I actually had to scrub it out of my day-old beard. But I believe it cured by cold."

Since sprains of the ankle joint are the most common injuries seen in every day practice the following method of *ankle strapping*, presented by Lieutenant Commander G. D. Delprat (U. S. Naval Medical Bulletin, October, 1941) is of interest.

"The adhesive strapping is applied in the following manner:

"After carefully shaving the leg from the knee to the ankle, a 2-inch strip of adhesive of sufficient length is applied, commencing just below the internal malleolus, is passed across the sole of the heel and held in close apposition to the head of the fibula. At the same time the ankle is held at flexion to a right angle, and with as much eversion of the foot as is possible to obtain.

"The adhesive is then applied to the side of the leg, under tension, and held by the patient's fingers at the head of the fibula.

"A second strip of adhesive is then applied, holding the adhesive in apposition to the leg at the region of the external malleolus. This strip does not circle the leg, but leaves a space one inch or more wide over the Achilles tendon.

"Theoretically, this support should be sufficient to splint the torn external lateral ligament, but actually if the procedure is stopped at this point, edema will occur over the foot distal to the circular strip. To prevent the formation of this edema, further strips of adhesive are applied surrounding the foot from the fold at the toes up to the first circular strip applied. All these strips, however, leave a space along the sole of the foot, and none of them overlap or press upon the Achilles tendon.

"A circular bandage is finally applied, serving to hold the adhesive in tight apposition to the skin, which is left in place for 24 hours. The adhesive is left on as long as 10 days if the skin tolerates the presence of the plaster, at the end of which time it may be replaced if necessary. On some individuals the entire dressing is changed after 4 or 5 days if it seems that the skin does not well tolerate the adhesive.

"The advantages of this type of strapping are obvious. It serves to support the torn external lateral ligament by means of a wide strong strip of ad-

hesive extending as far up the lower leg as possible, and therefore capable of taking up the strain and preventing the ankle being turned outward. The freedom of the Achilles tendon is very important, and no circular bandage should ever be applied which presses upon it.

"Even with severely injured ankles and marked swelling and pain it has been possible to return men to active work immediately after the application of the above strapping. Such results are certainly not possible with the narrow overlapping straps frequently applied about the ankle joint."

That the *sulfonamide drugs* are not a panacea for all ailments is gradually being recognized and more and more these drugs are assuming an important and definite place but not an all inclusive space in our armamentarium. In discussing these drugs H. F. Flippin (Journal of the Missouri Medical Association, October, 1941) emphasizes the importance of recognizing failure of drug therapy as follows.

"The failure of a patient suffering with an infection to respond to sulfonamide therapy within from forty-eight to seventy-two hours usually suggests several possibilities. First, a localized suppurative process such as empyema may be present, in which case surgical intervention is indicated. Second, there may be an overwhelming infection with spread, probably accompanied by blood stream involvement. Such cases should be given the benefit of serum in addition to the drug. Third, the causative agent of the infection may be an organism not susceptible to the drug, such as a virus. If, after seventy-two hours of chemotherapy, no improvement is noted the drug is best stopped. It is important that once treatment with one of these drugs is started it should be continued, unless severe toxic reactions occur, until a complete clinical cure is obtained. Not infrequently a recurrence or spread in the infection will occur if treatment is discontinued too early. A fall in temperature often proves deceptive and the importance of carefully performed physical studies to detect possible extension of the infectious process is indicated."

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To quarantine or not to quarantine is a question which is coming up for more and more debate. Following a general discussion of the subject ARE PRESENT DAY QUARANTINE METHODS ARCHAIC, A. L. Hoyne draws the following conclusions: (Illinois Medical Journal, Sept., 1941).

"1. The usual quarantine regulations for the control of the common contagious diseases have been an utter failure.

2. Contagious disease patients and susceptible contacts should be isolated.

3. In most instances, placarding of premises has no scientific value if the family concerned possesses average intelligence, and if the home is visited at proper intervals by a field nurse or health officer.

4. Infectious disease hospitals should be maintained primarily for those patients who require hospital treatment.

5. Satisfactory control of the common contagious diseases is only possible in those infections for which an efficient immunizing agent is available."

That these ideas are not acceptable by all is brought out by W. H. Tucker in a discussion of this paper who says:

"In summarizing I wish to repeat that it is my opinion that quarantine and placarding have made a definite contribution to communicable disease control. It is not wise to enforce quarantine regulations in a dogmatic manner nor is it wise to be lax and careless. We have found that firm enforcement of quarantine, combined with a program of health education of the patient and parent by the physician and public health nurse have been effective in communicable disease control."

With the winter season approaching more and more members of the sulfonamide group will be prescribed by physicians and it is well that we keep in mind the following advice which appeared in the Journal of the American Medical Association (May 17, 1941).

"Many therapeutically effective drugs influence the physiologic mechanisms, psychomotor reactions or judgment of persons who take them. When given to patients at rest in bed such drugs have been established as beneficial to the patient and of course harmless to other persons. Under some circumstances, however, drugs may have effects potentially dangerous to both patient and community. Not long ago a locomotive engineer who was taking sulfanilamide for an infection of the bladder was involved in an accident in which considerable property damage

was done and a number of people were injured. He described the event as follows:

"Approaching the station where the accident occurred, a feeling of lassitude seems to have crept over me unawares and to the extent that I do not have much recollection of what went on for the last two or three miles. I was sitting on my seat, looking out and feeling that I was on the alert. . . . Actually I was not on the job with all my faculties. I passed landmarks customarily used to locate position without seeing them, even to the station board; and it was only when the hazard became imminent that I was aroused out of it and became efficient."

"Already physicians have ruled that airplane pilots must not fly until four days have elapsed after they have received any of the sulfonamide group. Patients engaged in mechanical work of any kind should not take sulfanilamide except when relieved from their responsibilities. Physicians thus have a definite obligation when prescribing sulfanilamide. Patients should be cautioned preferably to stay at home and at rest while taking the drug and not to drive an automobile, make any important decision or sign any papers while the drug is being administered. Such recommendations seem especially advisable in view of the insidiously developing reactions of sulfanilamide when compared with such drugs as the bromides and the barbiturates."

Not only physicians but the public at large are becoming more and more *brucellosis* minded. The present status relative to the diagnosis of this condition is well summarized by Dr. F. T. McIntire in the May, 1941 issue of the Texas State Journal of Medicine.

"1. There are serious imperfections, limitations, and contradictory observations concerning available laboratory data.

2. There are no acceptable clinical criteria upon which to base a diagnosis of brucellosis.

3. The positive culture is the only absolutely diagnostic laboratory test.

4. One is not justified in making the diagnosis simply on the basis of one positive test, except the culture.

5. One is justified in making the diagnosis without positive culture, if the history and physical findings are in keeping with brucellosis, if other diseases capable of producing the same clinical picture can be excluded, and if at least two of the confirmatory tests are positive."

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New Auxiliary is Organized

On September 24th nineteen doctor's wives met in Orangeburg, S. C., and, with the assistance of Mrs. J. W. Kitchin, organizing chairman of the Auxiliary to the South Carolina Medical Association, Mrs. Richard M. Pollitzer, President, and Mrs. W. B. Furman, Past President, organized the Auxiliary to the Edisto Medical Society.

The officers of the new Auxiliary are Mrs. George Truluck, President, Mrs. L. P. Thackston, Vice President, Mrs. W. O. Whet-sell, Secretary, and Mrs. O. Z. Culler, Treas.

The members of this auxiliary plan to hold monthly meetings, after which lunch will be served.

We extend greetings to these new members, and wish for them close fellowship and much success in the activities in which they engage.

Cancer Control Campaign in Greenville

A series of educational cancer control programs have recently been promoted by the Auxiliary to the Greenville County Medical Society, of which Mrs. M. Nachman is president. Mrs. John Drake, State Chairman of the Woman's Field Army for Cancer Control, addressed seven of these meetings. Following this series the Greenville Auxiliary has been asked to furnish speakers for eight clubs which wish to present the subject of cancer control to their members. It is estimated that 2500 people have been reached through these programs.

HYGEIA, The Health Magazine

The first issue of this popular magazine appeared on April 26, 1923. The American Medical Association had long urged the publication of a health magazine. Hygeia has filled that long felt need.

Its Aims and Purposes

1. To supply its many subscribers in their

wide fields of endeavor with reliable, informative material concerning health.

2. To interpret scientific medicine to the public in simple non-technical language.

3. To flay the quack who undermines the mental and physical health of the public.

4. To discourage self-medication and fad-distic tendencies.

5. To reduce mortality and morbidity to its lowest possible level.

6. And to encourage healthful living and community hygiene.

As wives of doctors, we know that Hygeia presents authentic information on scientific subjects including that of nutrition, in understandable form, for lay readers. We realize the value of nutrition in National Defense. Hygeia is now running a series of valuable articles on nutrition, which will no doubt be welcomed by program chairmen.

The following suggestions are offered to county Hygeia chairmen:

1. Give complimentary subscriptions of Hygeia to N. Y. A. and Adult Education centers.

2. Promote Hygeia exhibits at county fairs by installing health booths where sample copies may be displayed.

3. Hygeia should be on the physicians and dentists' reception room tables.

4. Place Hygeia in all schools, public libraries, intern and nurses quarters in hospitals, rest rooms, beauty parlors, barber shops and institutions of all kinds. Gift subscriptions at Christmas time may be the best means of starting interest in Hygeia and result in paid subscriptions later.

Meet the challenge offered to us by the national program on health defense by co-operating 100% with each other and with the Circulation Manager of Hygeia to the end that this publication will reach those in every community who are confused with misinformation on health.

Ask your State Chairman about contest and prizes.

Mrs. Delmar O. Rhame
State Hygeia Chairman

Mrs. Richard Pollitzer, president of our auxiliary, was appointed to membership on the State Nutrition Committee by Gov. Burnett R. Maybank on Nov. 1st.

Mrs. Pollitzer was elected to the Board of Directors of the South Carolina Tuberculosis Association at the November meeting of that body.

Dr. B. Owen Ravenel, Roper Hospital, Charleston, S. C., has been elected a member of the Medical Society of S. C. at Charleston.

The six cardinal principles of treating *tetanus* are presented by E. M. Chapman and R. H. Miller in the New England Journal of Medicine, October '23, 1941.

"1. Profound sedation.

2. Surgical removal of the focus of tetanus.

3. Moderate intravenous dosages of tetanus anti-toxin.

4. Frequent lumbar punctures.

5. Maintenance of adequate respiratory exchange.

6. Intelligent nursing care."

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 Donnon, J. L.*-----Ware Shoals, S. C.
 Dotterer, T. D.-----Columbia, S. C.
 Doughty, R. G.-----Columbia, S. C.
 Dove, H. R.-----Columbia, S. C.
 Doyle, E. C.*-----Seneca, S. C.
 Doyle, W. R.*-----Seneca, S. C.
 DuBose, T. M., Jr.-----Columbia, S. C.

Dulin, T. N.*-----Clover, S. C.
 Dunlap, J. O.-----Rock Hill, S. C.
 Dunn, J. R.-----Sumter, S. C.
 Dunnivant, R. B.-----Edgefield, S. C.
 Durham, I. D.-----Columbia, S. C.
 Durham, R. B.-----Columbia, S. C.
 Durst, Geo. G.†-----Greenwood, S. C.
 Dwight, F. M.*-----Sumter, S. C.

 Eaddy, A. M.-----Columbia, S. C.
 Eaddy, N. O.-----Sumter, S. C.
 Eargle, H. M.-----Orangeburg, S. C.
 Earle, Bayliss-----Greenville, S. C.
 Earle, C. B.*-----Greenville, S. C.
 Earle, J. B.*-----Greenville, S. C.
 Eaves, J. V.-----Langley, S. C.
 Edwards, G. B.*-----Darlington, S. C.
 Edwards, H. A.-----Latta, S. C.
 Edwards, J. B.-----Swansea, S. C.
 Edwards, P. H.-----Conway, S. C.
 Edwards, W. W.†-----Greenville, S. C.
 Elliott, J. B.-----Fort Mill, S. C.
 Ellis, D. W.-----Charleston, S. C.
 Elvington, R. F.-----Lake View, S. C.
 Epps, C. B.-----Sumter, S. C.
 Epting, C. H.-----Columbia, S. C.
 Epting, E. E.-----Anderson, S. C.
 Eskrigge, Edith-----Columbia, S. C.
 Estes, Amos C.-----Winnsboro, S. C.
 Evans, Dexter M.-----Lake City, S. C.
 Evans, William-----Bennettsville, S. C.
 Evatt, Clay W.-----Charleston, S. C.

 Fair, C. H.†-----Greenville, S. C.
 Fairey, T. K.-----Johnston, S. C.
 Farmer, Rudolph-----State Park, S. C.
 Fender, M. S.-----Ehrhardt, S. C.
 Fennell, J. L.*-----Waterloo, S. C.
 Fennell, W. W.-----Rock Hill, S. C.
 Fewell, John M.-----Greenville, S. C.
 Fewell, W. S.-----Greenville, S. C.
 Fike, A. R.-----Spartanburg, S. C.
 Finger, Elliott†-----Marion, S. C.
 Finklea, O. T.-----Florence, S. C.
 Finney, C. S.-----Spartanburg, S. C.
 Finney, Roy P.-----Spartanburg, S. C.
 Fishburn, S. B.*-----Columbia, S. C.
 Fishburn, W. K.-----Monks Corner, S. C.
 Fleming, J. M.-----Spartanburg, S. C.
 Floyd, J. B.-----Great Falls, S. C.
 Floyd, I. C.-----Olanta, S. C.
 Folk, J. L.-----Fairfax, S. C.
 Folk, W. H.-----Spartanburg, S. C.
 Ford, Fred-----St. Matthews, S. C.
 Forte, J. A.-----North, S. C.
 Fouche, J. A.-----Columbia, S. C.
 Fouche, J. W.-----Columbia, S. C.
 Fox, W. M.†-----Columbia, S. C.
 Frampton, James*-----Charleston, S. C.
 Frampton, W. H.-----Charleston, S. C.
 Freed, J. E.-----Columbia, S. C.
 Fulenwider, J. O.-----Pageland, S. C.
 Fuller, R. M.-----Greenwood, S. C.

Fulmer, W. E.*-----Columbia, S. C.
 Funderburke, I. S.-----Cheraw, S. C.
 Furman, R. B.*-----Sumter, S. C.
 Furman, Thos. C.-----Greenville, S. C.

 Gaillard, P. C.†-----Beaufort, S. C.
 Gaines, T. R.-----Anderson, S. C.
 Gantt, R. B.-----Charleston, S. C.
 Garrett, J. F.-----Greenville, S. C.
 Garvin, O. D.-----Spartanburg, S. C.
 Gaston, F. P.-----Rock Hill, S. C.
 Gaston, J. N., Jr.-----Chester, S. C.
 Gaston, J. N., Sr.-----Edgmoor, S. C.
 Gaston, S. R.-----Traveler's Rest, S. C.
 Geiger, F. W.-----Columbia, S. C.
 George, W. E.†-----West Columbia, S. C.
 Gibbes, J. H.-----Columbia, S. C.
 Gibbes, R. W.*-----Columbia, S. C.
 Gibbs, W. R.-----Buffalo, S. C.
 Gibson, W. T.-----Batesburg, S. C.
 Giles, C. T. J.*-----Greenville, S. C.
 Gilmore, H. S.-----Nichols, S. C.
 Glennon, T. L.-----Denmark, S. C.
 Goings, J. G.*-----Union, S. C.
 Goldsmith, T. G.-----Greenville, S. C.
 Goodlett, O. M., Jr.-----Pelzer, S. C.
 Goodwin, C. I.-----Holly Hill, S. C.
 Graham, Chas. M.-----Clio, S. C.
 Gray, J. L.*-----Anderson, S. C.
 Green, D. W.†-----Conway, S. C.
 Green, J. T.-----Columbia, S. C.
 Gregg, D. B.-----Columbia, S. C.
 Griffin, H. H.*-----Columbia, S. C.
 Griggs, D. C.-----Pageland, S. C.
 Grigsby, W. D.-----Blaney, S. C.
 Grimball, I. H.-----Greenville, S. C.
 Gross, H. A.-----Barnwell, S. C.
 Guess, J. D.-----Greenville, S. C.
 Guignard, J. B.*-----Columbia, S. C.
 Cuyton, C. L.-----Columbia, S. C.

 Haddock, S. H.-----Anderson, S. C.
 Hair, J. T.-----Aiken, S. C.
 Hall, H. F.†-----Columbia, S. C.
 Hall, H. T.-----Aiken, S. C.
 Hall, J. C.-----Gaffney, S. C.
 Hall, L. F.-----State Park, S. C.
 Hall, T. G.-----Westminster, S. C.
 Hall, W. S.-----Columbia, S. C.
 Ham, Coyt-----Columbia, S. C.
 Hames, H. T.-----Jonesville, S. C.
 Hamilton, R. G.-----Columbia, S. C.
 Hanckel, R. W.-----Charleston, S. C.
 Hardy, B. F.-----Dillon, S. C.
 Harper, J. C.-----Greenwood, S. C.
 Harper, T. B.-----St. Stephens, S. C.
 Harris, H. H.-----Anderson, S. C.
 Harris, J. C.-----Lancaster, S. C.
 Harrison, J. D.-----Greenwood, S. C.
 Harrison, J. P.-----Cheraw, S. C.
 Hart, J. G.-----Laurens, S. C.
 Hart, W. A.-----Columbia, S. C.
 Harter, J. W.-----Orangeburg, S. C.

Harvin, W. S.	Manning, S. C.	Hunter, P. W.	York, S. C.
Hay, P. D.	Florence, S. C.	Hutchinson, M. E.	Columbia, S. C.
Hay, L. S.	Rock Hill, S. C.	Huth, P. E.	Sumter, S. C.
Hayne, Isaac	Congaree, S. C.	Jackson, D. B.	Greer, S. C.
Hayne, J. Adams*	Columbia, S. C.	Jacobs, C. D.	Kingstree, S. C.
Haynes, Jas. A.	Hampton, S. C.	James, F. G.*	Greer, S. C.
Haynie, Jas. W.	Honea Path, S. C.	Jeanes, R. P.†	Easley, S. C.
Haynie, W. R.*	Belton, S. C.	Jenkins, P. G.	Charleston, S. C.
Hays, S. C.	Clinton, S. C.	Jennings, Douglas	Bennettsville, S. C.
Hearin, W. C.	Greenville, S. C.	Jervey, J. W., Jr.	Greenville, S. C.
Hearn, Paul P.	Greenville, S. C.	Jervey, J. W.*	Greenville, S. C.
Heidt, G. F.	Charleston, S. C.	Johnson, A. H.	Hemingway, S. C.
Hemingway, T. S.	Kingstree, S. C.	Johnson, F. B.	Charleston, S. C.
Hendrix, W. T.	Spartanburg, S. C.	Johnson, Geo. D.	Spartanburg, S. C.
Hennies, Geo. A.	Chester, S. C.	Johnson, A. R., Jr.	St. George, S. C.
Henry, B. A.*	Anderson, S. C.	Johnston, B. R.	Estill, S. C.
Henry, W. J.	Chester, S. C.	Johnston, J. B.	St. George, S. C.
Hentz, E. O.	Anderson, S. C.	Jordan, F.*	Greenville, S. C.
Herbert, H. W.	Florence, S. C.	Josey, A. I.	Columbia, S. C.
Herlong, E. E.	Rock Hill, S. C.	Josey, J. C.	Spartanburg, S. C.
Herring, H. D.	St. George, S. C.	Josey, R. B.	Columbia, S. C.
Hewitt, Ragsdale	Sumter, S. C.	Judy, W. S.	Greenville, S. C.
Heyward, N. B.	Columbia, S. C.	Kalayjian, Bernard	Charleston, S. C.
Hicks, E. M.	Florence, S. C.	Keisler, D. S.	Leesville, S. C.
Hicks, W. E.	Timmons ville, S. C.	Kell, T. B.*	Fort Lawn, S. C.
Hiers, H. G.	Bamberg, S. C.	Kelley, E. T.	Kingstree, S. C.
Hill, C. C.*	Darlington, S. C.	Kelley, W. H.	Charleston, S. C.
Hill, John B.	Greenville, S. C.	Kendall, B. W.	Columbia, S. C.
Hill, J. C.*	Abbeville, S. C.	Kennedy, F. A.	Langley, S. C.
Hill, R. D.	Pacolet, S. C.	Kennedy, G. L.	Ninety-Six, S. C.
Hinson, A.	Rock Hill, S. C.	Keyserling, B. H.†	Beaufort, S. C.
Hiott, J. T.	Charleston, S. C.	Kibler, C. L.*	Columbia, S. C.
Hogan, O. F.	Greelyville, S. C.	Kinard, D. D.	Greenwood, S. C.
Holley, O. C.	Leesville, S. C.	King, E. H.	Hartsville, S. C.
Holloway, W. J.	Ware Shoals, S. C.	King, H. B.	Lake City, S. C.
Holloway, W. O.	Chappells, S. C.	King, W. W.	Batesburg, S. C.
Holman, D. O.	Timmons ville, S. C.	Kinney, C. A.	Florence, S. C.
Holman, J. M.†	Charleston, S. C.	Kinney, P. M.	Bennettsville, S. C.
Holmes, Gertrude	Greenville, S. C.	Kirkpatrick, L. R.	Belton, S. C.
Holmes, H. B.	Conway, S. C.	Kitchin, J. W.	Liberty, S. C.
Holtzclaw, J. N.	Greenville, S. C.	Kneece, J. F.	Blackville, S. C.
Hood, E. C.	Darlington, S. C.	Knowlton, H. A.	Spartanburg, S. C.
Hood, W. A.*	Hickory Grove, S. C.	Koontz, L. A.†	Charleston, S. C.
Hook, M. W.	Cheraw, S. C.	Kredel, F. E.	Charleston, S. C.
Hope, A. C.	Union, S. C.	LaBorde, J. B.	Columbia, S. C.
Hope, H. P.	Union, S. C.	Lancaster, W. B.	Spartanburg, S. C.
Hope, R. M.	Charleston, S. C.	LaRoche, J. J.	Charleston, S. C.
Hopkins, T. J.	Columbia, S. C.	Lassex, A. M.	Charleston, S. C.
Horger, E. L.	Columbia, S. C.	Latimer, J. B.	Anderson, S. C.
Horger, E. O.	Greenville, S. C.	Law, E. H.†	Columbia, S. C.
Horton, C. C.	Pendleton, S. C.	Lawther, F. R.	Monks Corner, S. C.
Hoshall, F. A.	Charleston, S. C.	Ledbetter, F. C.	Greenville, S. C.
Houck, T. H.	Florence, S. C.	Lee, Lamar	Florence, S. C.
Houseal, R. W.	Newberry, S. C.	Lemmon, C. J.*	Sumter, S. C.
Houston, R. E.	Greenville, S. C.	Leonard, O. W.	Spartanburg, S. C.
Howell, J. R.	Aiken, S. C.	Lester, W. E.	Mullins, S. C.
Howell, J. T.	Florence, S. C.	Lide, C. M.†	Columbia, S. C.
Hughes, Jas. L.	Greer, S. C.	Lide, L. M.	Florence, S. C.
Hughston, Geo. F.	Fairforest, S. C.	Linton, I. G.†	Charleston, S. C.
Humphries, A. W.	Camden, S. C.	Lippert, K. M.	Lancaster, S. C.
Hunsucker, W. C.	Bennettsville, S. C.		
Hunter, J. H.	Spartanburg, S. C.		

Lipscombe, J. E.†-----Greenville, S. C.
 Littlejohn, T. R.-----Sumter, S. C.
 Livingston, Robt-----Fountain Inn, S. C.
 Liverman, J. S.-----Lexington, S. C.
 Long, E. W.-----Columbia, S. C.
 Long, V. A.-----Prosperity, S. C.
 Love, S. G.-----Rock Hill, S. C.
 Lowman, A. W.-----Denmark, S. C.
 Lucas, S. R.-----Florence, S. C.
 Lucas, T. L.†-----Charleston, S. C.
 Luttrell, L. W.-----Walterboro, S. C.
 Lyday, W. H.-----Greenville, S. C.
 Lyles, W. B.-----Spartanburg, S. C.
 Lynch, K. M.-----Charleston, S. C.
 Lynch, W. S.-----Lake City, S. C.

 McBrearty, J. D.†-----Williamston, S. C.
 McCalla, L. H.-----Greenville, S. C.
 McCants, C. S.-----Winnsboro, S. C.
 McCord, O. H.-----Woodruff, S. C.
 McCrady, R. L.-----Charleston, S. C.
 McCurry, W. E.-----Ridge Spring, S. C.
 McCutchen, G. T.-----Columbia, S. C.
 McDaniel, G. E.-----Columbia, S. C.
 McDaniel, W. Y.*-----Taylors, S. C.
 MacDonald, Roderick-----Rock Hill, S. C.
 McDowell, H. E.-----Spartanburg, S. C.
 McElroy, A. P.-----Union, S. C.
 McElroy, H. A.-----Columbia, S. C.
 McGill, W. K.-----Clover, S. C.
 McIlwain, W. L.-----Belton, S. C.
 McInnes, B. K.-----Charleston, S. C.
 McInnes, G. F.†-----Charleston, S. C.
 MacInnis, K. B.-----Columbia, S. C.
 McLawhorn, B. C.-----Greenville, S. C.
 McLean, J. W.-----Greenville, S. C.
 McLendon, S. B.-----Columbia, S. C.
 McLeod, James-----Florence, S. C.
 McLeod, F. H.*-----Florence, S. C.
 McMillan, C. B.-----Lake View, S. C.
 McMillan, L. M.-----Mullins, S. C.
 McNulty, R. B.-----Columbia, S. C.
 McWhorter, W. B.-----Anderson, S. C.

 Mabry, F. L.-----Abbeville, S. C.
 Mack, W. L.-----Cordova, S. C.
 Madden, L. E.-----Columbia, S. C.
 Maddox, Theo*-----Union, S. C.
 Maguire, D. L.*-----Charleston, S. C.
 Maguire, D. L., Jr.-----Charleston, S. C.
 Mamin, Harry-----Columbia, S. C.
 Martin, F. L.-----Mullins, S. C.
 Martin, F. N.-----Charleston, S. C.
 Martin, J. L.-----Mullins, S. C.
 Martin, J. W.-----Anderson, S. C.
 Martin, T. H.-----Charleston, S. C.
 Martin, T. W.-----Belton, S. C.
 Martin, W. T.-----Goldville, S. C.
 Massey, J. E.-----Rock Hill, S. C.
 Mathias, J. H.-----Lexington, S. C.
 Mathis, W. H.-----North Augusta, S. C.
 Matthews, D. N.-----Columbia, S. C.
 Matthews, J. H.-----Elliott, S. C.

May, Chas. R.*-----Bennettsville, S. C.
 Mayer, O. B.†-----Columbia, S. C.
 Mays, W. C.-----Fair Play, S. C.
 Mazych, McM. K.*-----Charleston, S. C.
 Mead, Walter, R.-----Florence, S. C.
 Michaux, D. M.-----Dillon, S. C.
 Michaux, E. B.-----Dillon, S. C.
 Michie, D. E.-----Marion, S. C.
 Mikell, I. J.-----Columbia, S. C.
 Miles, Louis S.-----Summerville, S. C.
 Milford, J. C.-----Anderson, S. C.
 Milford, Lee-----Clemson, S. C.
 Miller, Ben*-----Hickory Grove, S. C.
 Miller, B. N.-----Columbia, S. C.
 Miller, C. J.-----Inman, S. C.
 Miller, S. E.†-----State Park, S. C.
 Milling, C. J.-----Columbia, S. C.
 Mills, J. H.-----Mayesville, S. C.
 Mills, W. E.*-----Sumter, S. C.
 Mims, J. L.-----Lexington, S. C.
 Mitchell, J. C.*-----Charleston, S. C.
 Mobley, C. A.-----Orangeburg, S. C.
 Mobley, M. R.-----Florence, S. C.
 Moncrief, W. H.-----State Park, S. C.
 Montgomery, B. M.-----Kingstree, S. C.
 Mood, G. McF.*-----Charleston, S. C.
 Mood, H. A.*-----Sumter, S. C.
 Moore, A. T.-----Columbia, S. C.
 Moore, E. H.-----Newberry, S. C.
 Moore, Geo. G.-----McColl, S. C.
 Moore, J. C.-----Duncan, S. C.
 Moore, J. C.-----McColl, S. C.
 Moore, M. S.-----Charleston, S. C.
 Moorman, V. R.†-----Charleston, S. C.
 Morgan, H. B.-----Ware Shoals, S. C.
 Morrall, S. A.-----Graniteville, S. C.
 Morehouse, W. G.-----Spartanburg, S. C.
 Morrison, C. W.-----Lancaster, S. C.
 Morrow, S. J.-----Inman, S. C.
 Mosteller, Malcolm-----Columbia, S. C.
 Munro, Catherine N.-----Columbia, S. C.
 Murray, J. G.-----Greenville, S. C.

 Nachman, M.-----Greenville, S. C.
 Neely, A. T.-----Newberry, S. C.
 Neidich, S.-----Beaufort, S. C.
 Neil, M. B.-----Clover, S. C.
 Nelson, M. L.-----North, S. C.
 Nesbitt, J. N.*-----Gaffney, S. C.
 Nesbitt, L. T.-----Gaffney, S. C.
 Newsom, R. M.-----Ruby, S. C.
 Nicholson, A. R.-----Edgefield, S. C.
 Nickles, M. B.-----Laurens, S. C.
 Niel, A. H.-----Clover, S. C.
 Nimmons, L. A.-----Bishopville, S. C.
 Noel, G. T.-----Lancaster, S. C.
 Northrop, T. M.-----Greenville, S. C.
 Norville, W. L.-----Whitmire, S. C.

 O'Driscoll, W. C.*-----Charleston, S. C.
 O'Hear, Jas., Jr.-----Charleston, S. C.
 Oliver, B. M.†-----State Park, S. C.
 Orr, J. E.-----Seneca, S. C.
 Owens, F. C.-----Columbia, S. C.

Owings, F. P.†.....Union, S. C.
 Oxner, C. E.....West Columbia, S. C.
 O'Daniel, G. R.....Hartsville, S. C.
 Pace, W. T.....Gray Court, S. C.
 Palmer, J. S.....Allendale, S. C.
 Parker, E. F.....Charleston, S. C.
 Parker, F. L.*.....Charleston, S. C.
 Parker, H. M.....Sumter, S. C.
 Parker, J. D.....Greenville, S. C.
 Parker, J. W., Jr.....Calhoun Falls, S. C.
 Parker, Thos.†.....Greenville, S. C.
 Parrish, M. E.....Sumter, S. C.
 Patterson, V. P.....Chester, S. C.
 Payne, P. E.....Columbia, S. C.
 Pearce, J. C.....Graniteville, S. C.
 Pearce, J. H.....Florence, S. C.
 Pearson, A. S.....Woodruff, S. C.
 Peek, D. E.....Six Mile, S. C.
 Peel, Geo. T.....Anderson, S. C.
 Peebles, G. S. T.....Charleston, S. C.
 Peebles, M. L.....Greer, S. C.
 Pepper, J. C.....Easley, S. C.
 Perkins, R. H.....Laurens, S. C.
 Perry, W. J.....Chesterfield, S. C.
 Perry, Wm. L.....Chesterfield, S. C.
 Pettus, W. J.....Charleston, S. C.
 Phifer, I. A.....Spartanburg, S. C.
 Pinner, C. A.....Peak, S. C.
 Pittman, J. D.....Lancaster, S. C.
 Pittman, J. G., Jr.....Gaffney, S. C.
 Pittman, J. G., Sr.*.....Gaffney, S. C.
 Pitts, L. W.....Columbia, S. C.
 Pitts, T. A.....Columbia, S. C.
 Plowden, H. H.....Columbia, S. C.
 Poliakoff, A. E.....Abbeville, S. C.
 Pollitzer, R. M.....Greenville, S. C.
 Poole, Everett†.....Greenville, S. C.
 Poole, R. Earle.....Spartanburg, S. C.
 Poole, L. R.....Easley, S. C.
 Pope, D. S.....Columbia, S. C.
 Pope, T. H.....Newberry, S. C.
 Porter, J. H.....Andrews, S. C.
 Poston, W. H.....Pamplico, S. C.
 Potts, Joe W.....Easley, S. C.
 Powe, J. L.*.....Hartsville, S. C.
 Powe, W. H.....Greenville, S. C.
 Power, E. L.....Abbeville, S. C.
 Power, J. R.....Abbeville, S. C.
 Preacher, A. B.....Allendale, S. C.
 Pressly, W. L.....Due West, S. C.
 Preston, J. M.....State Park, S. C.
 Price, F. R.....Charleston, S. C.
 Price, Geo.†.....Spartanburg, S. C.
 Price, Julian P.....Florence, S. C.
 Price, W. H.....Charleston, S. C.
 Prioleau, W. H.....Charleston, S. C.
 Pruitt, H. A.....Anderson, S. C.
 Pruitt, Olga V.....Anderson, S. C.
 Pugh, Ruth Frank.....Spartanburg, S. C.
 Purvis, O. H.....Cheraw, S. C.

Quantz, N. G.....Rock Hill, S. C.
 Quattlebaum, J. T.....Columbia, S. C.
 Rainey, J. F.....Anderson, S. C.
 Ratliff, J. W.....Anderson, S. C.
 Ravenel, J. J.....Charleston, S. C.
 Ravenel, L. J.....Florence, S. C.
 Ravenel, W. J.....Charleston, S. C.
 Raysor, H. C.....St. Matthews, S. C.
 Reeves, T. B.....Greenville, S. C.
 Reid, S. D.....Chesnee, S. C.
 Remsen, D. B.....Charleston, S. C.
 Reynolds, T. W.....Charleston, S. C.
 Rhame, D. O.....Clinton, S. C.
 Rhame, G. S.....Camden, S. C.
 Rhame, J. S.....Charleston, S. C.
 Rhett, R. B.....Charleston, S. C.
 Rhett, W. M.....Charleston, S. C.
 Rhett, W. P.....Charleston, S. C.
 Rhodes, F. K.....Florence, S. C.
 Rice, M. M.*.....Columbia, S. C.
 Rice, W. T.....Charleston, S. C.
 Richards, G. P.....Charleston, S. C.
 Richardson, L. L.*.....Simpsonville, S. C.
 Rhinehart, V. W.....Walhalla, S. C.
 Riser, L. A.....Greensboro, N. C.
 Ritter, Adolph.....Ridgeland, S. C.
 Rivers, A. L.....Charleston, S. C.
 Robertson, H. C., Jr.....Charleston, S. C.
 Rodgers, F. D.....Columbia, S. C.
 Rogers, W. C.....Hemingway, S. C.
 Roof, G. M. S.....Columbia, S. C.
 Roper, C. P.....York, S. C.
 Rose, Henry.....Greenville, S. C.
 Rosenfeld, A. P.†.....Dillon, S. C.
 Rourk, M. H.....Myrtle Beach, S. C.
 Rourk, W. A.....Myrtle Beach, S. C.
 Routh, F. M.....Columbia, S. C.
 Royal, H. G.†.....Greenville, S. C.
 Rubinowitz, B.....Columbia, S. C.
 Rutledge, Edward*.....Charleston, S. C.
 Rutledge, H. M.....Laurens, S. C.
 Ryan, C. P.....Ridgeland, S. C.
 Ryan, John.....Chesnee, S. C.
 Ryan, Thos. E.....Chesnee, S. C.
 Ryan, W. B., Jr.....Beaufort, S. C.
 Salley, F. P.....Union, S. C.
 Salters, L. B.....Florence, S. C.
 Sanders, F. H.....Spartanburg, S. C.
 Sanders, J. H.....Gaffney, S. C.
 Sanders, J. O.....Anderson, S. C.
 Sanders, P. W., Jr.....Charleston, S. C.
 Sanders, R. I.....Columbia, S. C.
 Sarratt, S. G.*.....Union, S. C.
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 Saunders, J. L.....Greenville, S. C.
 Saye, E. B.....Spartanburg, S. C.
 Saye, J. H.*.....Sharon, S. C.
 Saye, W. E.....Columbia, S. C.
 Scarborough, A.....Greenville, S. C.
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Scharlock, T. M.*	Charleston, S. C.	Strauss, D. D.	Bennettsville, S. C.
Schiffley, H. T.	Orangeburg, S. C.	Strickland, W. A.*	Westminster, S. C.
Schneider, L. A.	Ninety Six, S. C.	Strong, E. E.	York, S. C.
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Scott, Jas. E.	Charleston, S. C.	Stuckey, T. M.	Bamberg, S. C.
Scott, J. E., Jr.	McClellanville, S. C.	Stukes, L. C.	Summerton, S. C.
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Sease, J. C.	Newberry, S. C.	Sumner, Roy	Rock Hill, S. C.
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Setzler, J. B.	Columbia, S. C.	Taft, Robt. B.	Charleston, S. C.
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Willcox, J. M.-----	Darlington, S. C.	Zimmerman, W. S.-----	Spartanburg, S. C.

† following name indicates serving in armed forces.

* following name indicates honorary fellowship.

THE JOURNAL OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

GREENVILLE, SOUTH CAROLINA



JANUARY, 1941. VOL. XXXVII. NO. 1

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BACKGROUND

Three Decades of Clinical Experience

THE use of cow's milk, water and carbohydrate mixtures represents the one system of infant feeding that consistently, for three decades, has received universal pediatric recognition. No carbohydrate employed in this system of infant feeding enjoys so rich and enduring a background of authoritative clinical experience as Dextri-Maltose.

DEXTRI-MALTOSE No. 1 (with 2% sodium chloride), for normal babies.

DEXTRI-MALTOSE No. 2 (plain, salt free), permits salt modifications by the physician.

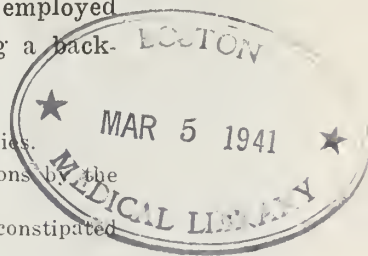
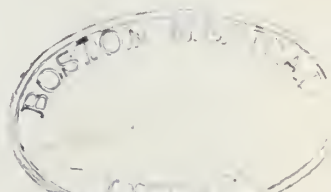
DEXTRI-MALTOSE No. 3 (with 3% potassium bicarbonate), for constipated babies.

These products are hypo-allergenic.

DEXTRI-MALTOSE

Please enclose professional card when requesting samples of Mead Johnson products to cooperate in preventing their reaching unauthorized persons

—Mead Johnson & Company, Evansville, Ind., U. S. A.—





Petrolagar*...for the *Treatment of Constipation*



● Petrolagar Plain, is a bland emulsion of high grade mineral oil. It helps to soften the feces and promotes the formation of an easily passed stool.

Petrolagar Plain helps maintain regular bowel movement without the use of harsh laxatives.

Suggested dosage:

Adults—Tablespoonful morning and night as required

Children—Teaspoonful once or twice daily as required



*Petrolagar—The trademark of Petrolagar Laboratories, Inc., brand emulsion of mineral oil . . . Liquid petrolatum 65 cc. emulsified with 0.4 gm. agar in menstruum to make 100 cc.

Petrolagar Laboratories, Inc. • 8131 McCormick Boulevard • Chicago, Illinois

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under Act of Mar. 3, 1879. Accepted for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized Aug. 2, 1918.

THE JOURNAL

OF THE
SOUTH CAROLINA MEDICAL ASSOCIATION



GREENVILLE, SOUTH CAROLINA

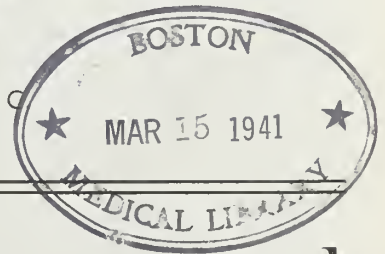
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FOLLICULAR NASO-PHARYNGITIS
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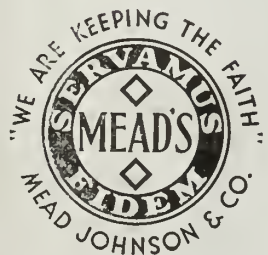


There is a Council-Accepted
high potency fish liver oil
available that is advertised
only to the medical profession
and not exploited to the laity.
It is called **OLEUM PERCOMORPHUM--**

(liquid and capsules) Specify **MEAD'S.**

Yours for Keeping the Faith
MEAD JOHNSON & COMPANY

EVANSVILLE, INDIANA, U.S.A.





Petrolagar*...for the *Treatment of Constipation*



• Petrolagar Plain, is a bland emulsion of high grade mineral oil. It helps to soften the feces and promotes the formation of an easily passed stool.

Petrolagar Plain helps maintain regular bowel movement without the use of harsh laxatives.

Suggested dosage:

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Children—Teaspoonful once or twice daily as required



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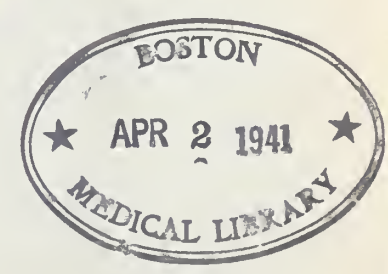
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A SKETCH OF THE LIFE OF J. L. E. W. SHECUT
BY ROBERT WILSON, M. D., CHARLESTON, S. C.



BRIEF HISTORICAL NOTES ON MEAD'S CEREAL AND PABLUM

HAND in hand with pediatric progress, the introduction of Mead's Cereal in 1930 marked a new concept in the function of cereals in the child's dietary. For 150 years before that, since the days of "pap" and "panada," there had been no noteworthy improvement in the nutritive quality of cereals for infant feeding. Cereals were fed principally for their carbohydrate content.

The formula of Mead's Cereal was designed to supplement the baby's diet in minerals and vitamins, especially iron and B₁. How well it has succeeded in these functions may be seen from two examples:

(1) As little as one-sixth ounce of Mead's Cereal supplies over half of the iron and more than one-fifth of the vitamin B₁ minimum requirements of the 3-months-old bottle-fed baby. (2) One-half ounce of Mead's Cereal furnishes all of the iron and two-thirds of the vitamin B₁ minimum requirements of the 6-months-old breast-fed baby.

That the medical profession has recognized the importance of this contribution is indicated by the fact that cereal is now included in the baby's diet as early as the third or

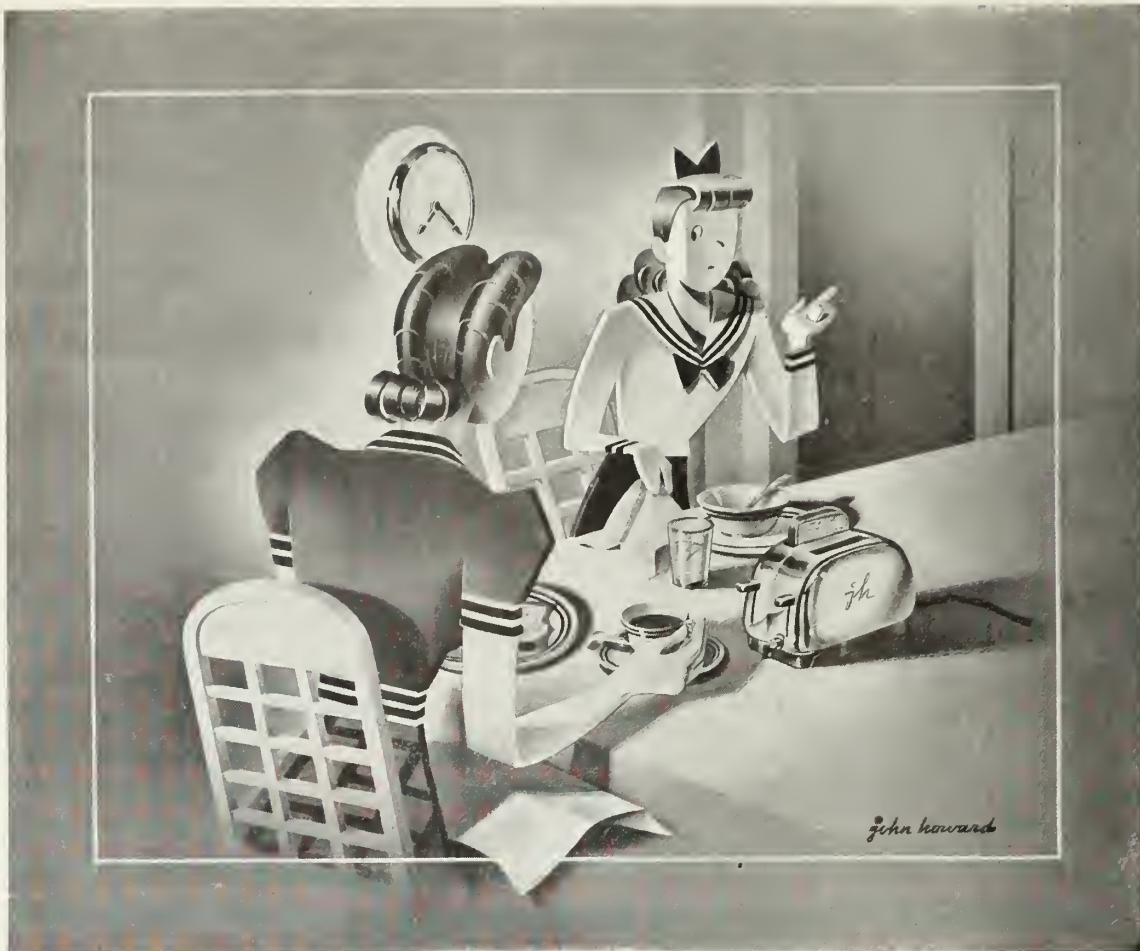
fourth month instead of at the sixth to twelfth month as was the custom only a decade or two ago.

In 1933 Mead Johnson & Company went a step further, improving the Mead's Cereal mixture by a special process of cooking, which rendered it easily tolerated by the infant and at the same time did away with the need for prolonged cereal cooking in the home. The result is Pablum, an original product which offers all of the nutritional qualities of Mead's Cereal, plus the convenience of thorough scientific cooking.

During the last ten years, these products have been used in a great deal of clinical investigation on various aspects of nutrition, which have been reported in the scientific literature.

Many physicians recognize the pioneer efforts on the part of Mead Johnson & Company by specifying Mead's Cereal and PABLUM.

Pablum is a palatable mixed cereal food, vitamin and mineral enriched, composed of wheatmeal (farina), oatmeal, cornmeal, wheat embryo, beef bone, brewers' yeast, alfalfa leaf, sodium chloride, and reduced iron.



Petrolagar*

Helps establish habit time



- The establishment of Habit Time for bowel movement may be aided by the use of Petrolagar Plain.

As part of a complete program for treatment of constipation, Petrolagar contributes to the restoration of normal bowel movement by softening fecal mass.

Petrolagar induces comfortable evacuation which tends to encourage the development of a regular "HABIT TIME."



*Petrolagar—The trademark of Petrolagar Laboratories, Inc., brand emulsion of mineral oil . . . Liquid petrolatum 65 cc. emulsified with 0.4 gm. agar in menstruum to make 100 cc.

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THE JOURNAL

OF THE

SOUTH CAROLINA MEDICAL ASSOCIATION

GREENVILLE, SOUTH CAROLINA

APRIL, 1941, VOL. XXXVII. NO. 4



GREENVILLE

NUMBER

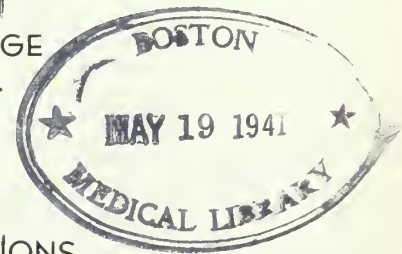
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CONGENITAL MALFORMATION OF THE ANUS-OPERATIVE CURE
BY G. T. TYLER, JR., M. D. GREENVILLE, S. C.



Are the Neuritic Symptoms of Pregnancy due to deficiency of Vitamin B₁ (thiamine)

SUCH neuritic symptoms of pregnancy as pains in arms and legs, muscle weakness, and paralysis of the extremities may result from a shortage of the antineuritic vitamin, recent investigations appear to show. Strauss and McDonald report that polyneuritis of pregnancy is a dietary deficiency disorder similar to beriberi, responding to treatment with dried brewers' yeast, rich in vitamin B₁ (thiamine). Wechsler, Hirst, Luikart, Gustafson, and other authorities observe that the avitaminosis is probably the result of hyperemesis gravidarum.

Vorhaus and associates, after administering large amounts of vitamin B₁ (thiamine) to 250 patients having various types of neuritis, including that of pregnancy, observed improvement, ranging from partial relief of pain to complete recovery, in about 90 per cent.



Consisting of nonviable yeast, Mead's Brewers Yeast Tablets offer not less than 50 International vitamin B₁ units and 42-50 Sherman vitamin G units per gram. Each tablet furnishes 20 International vitamin B₁ units and 20 Sherman vitamin G units. Supplied in bottles of 250 and 1,000 tablets, also in 6 oz. bottles of powder.

MEAD JOHNSON & COMPANY, Evansville, Ind., U. S. A.

Please enclose professional card when requesting samples of Mead Johnson products to cooperate in preventing their reaching unauthorized persons.



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- The establishment of Habit Time for bowel movement may be aided by the use of Petrolagar Plain.

As part of a complete program for treatment of constipation, Petrolagar contributes to the restoration of normal bowel movement by softening fecal mass.

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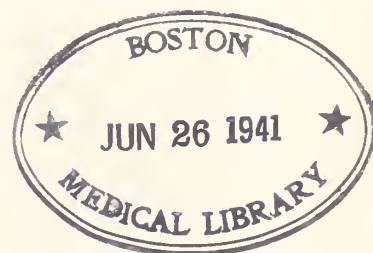
THE JOURNAL OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

GREENVILLE, SOUTH CAROLINA



MAY, 1941. VOL. XXXVII. NO. 5

Annual Meeting
Issue



BACKGROUND

Three Decades of Clinical Experience

THE use of cow's milk, water and carbohydrate mixtures represents the one system of infant feeding that consistently, for three decades, has received universal pediatric recognition. No carbohydrate employed in this system of infant feeding enjoys so rich and enduring a background of authoritative clinical experience as Dextri-Maltose.

DEXTRI-MALTOSE No. 1 (with 2% sodium chloride), for normal babies.

DEXTRI-MALTOSE No. 2 (plain, salt free), permits salt modifications by the physician.

DEXTRI-MALTOSE No. 3 (with 3% potassium bicarbonate), for constipated babies.

These products are hypo-allergenic.

DEXTRI-MALTOSE

Please enclose professional card when requesting samples of Mead Johnson products to cooperate in preventing their reaching unauthorized persons

Mead Johnson & Company, Evansville, Ind., U. S. A.



Petrolagar* . . . an Aid to Regular Comfortable Bowel Movement



• Petrolagar provides bland unabsorbable fluid to augment the moisture in the stool and help establish a regular comfortable bowel movement. It softens hard, dry feces and brings about a well-formed yielding mass that usually responds to normal peristaltic impulses. By keeping the content soft and moist, Petrolagar induces easy, comfortable bowel movement which tends to encourage the development of regular Habit Time.

Suggested dosage:

ADULTS—Tablespoonful morning and night as required.
CHILDREN—Teaspoonful once or twice daily as required.



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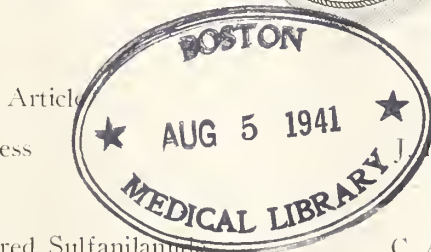
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Woman's Auxiliary — Book Review

HIS FIRST CEREAL FEEDING

IT is a fortunate provision of Nature that at the time the infant is ready to receive the nutritional benefits of cereal, his taste is unspoiled by sweets, pastry, condiments, tobacco, alcohol and other things to which adult palates and constitutions have become conditioned.

Many a parent, with limited knowledge of nutrition, attempts to do the baby's tasting for him.

Partial to sweets, the mother sweetens her child's cereal. Disliking cod liver oil, she wrinkles her nose and sighs: "Poor child, to have to take such awful stuff!" The child is quick to learn by example, and soon may become poor indeed—in nutrition, as well as in mental habits and psychological adjustment.

Appreciating the importance and difficulties of the physician's problem in establishing and maintaining good eating habits,

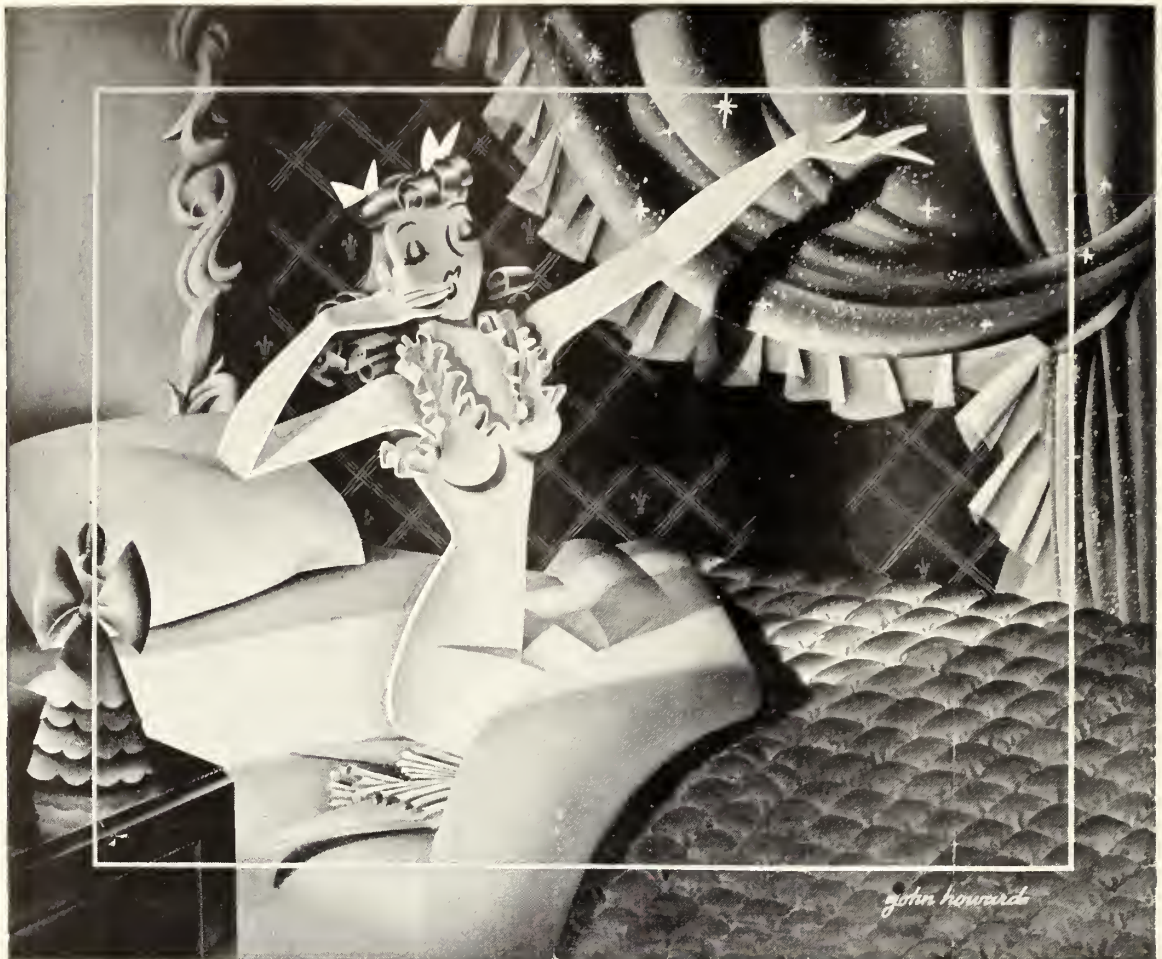
Mead Johnson & Company continue to supply Pablum in its natural form. No sugar is added. There is no corresponding dilution of the present protein, mineral and vitamin content of Pablum. Is this not worth while?

Pablum consists of wheatmeal (farina), oatmeal, wheat embryo, cornmeal, beef bone, alfalfa leaf, brewers' yeast, sodium chloride, and reduced iron.

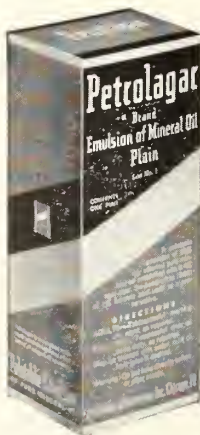


The baby's first solid food always excites the parent's interest. Will he cry? Will he spit it up? Will he try to swallow the spoon? Far more important than the child's "cute" reactions is the fact that figuratively and physiologically this little fellow is just beginning to eat like a man.

MEAD JOHNSON & CO.,
Evansville, Indiana, U. S. A.



Petrolagar*.. *Helps* *Start the Day Right*



• When "Habit Time" is neglected and the patient tends to become constipated, consider the use of Petrolagar as an aid to regular comfortable bowel movement. One to two tablespoonfuls daily (see directions on package) provide bland fluid to help soften the feces and bring about an easily passed, well-formed stool. As soon as a regular "Habit Time" has been re-established, the daily dosage of Petrolagar may be gradually diminished until treatment is no longer required.

Have you prescribed Petrolagar recently?

SAMPLES ARE AVAILABLE TO PHYSICIANS ON REQUEST



*Petrolagar—The trademark of Petrolagar Laboratories, Inc., brand emulsion of mineral oil . . . Liquid petrolatum 65 cc. emulsified with 0.4 gm. agar in a menstruum to make 100 cc.

Petrolagar Laboratories, Inc. • 8134 McCormick Boulevard • Chicago, Illinois

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THE JOURNAL OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

GREENVILLE, SOUTH CAROLINA

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BACKGROUND

Three Decades of Clinical Experience

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These products are hypo-allergenic.

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Mead Johnson & Company, Evansville, Ind., U. S. A.



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As a Bland Cleansing Enema

• The effect of a Petrolagar cleansing enema is to soften thoroughly the inspissated stool, and help establish a complete, comfortable bowel movement. Petrolagar serves this purpose well because it is miscible with water, a virtue that enables an even dissemination of minute oil globules throughout the residue in the colon.

The Petrolagar cleansing enema is preferable to irritating soap solutions in either the home or the hospital, because of its gentle, but thorough softening action.

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Scientific Background

Mead's Cereal was introduced in 1930, and Pablum in 1932, by Mead Johnson & Company. Since then, the growing literature indicates early recognition and continued acceptance of these products and the important pioneer principles they represent.



For Stubborn Cases...

Petrolagar* with Cascara



Stubborn cases of constipation usually yield to Petrolagar with Cascara.

This preparation provides sufficient laxative effect to help restore normal bowel habit in chronic cases, yet it is mild enough for use in obstetrical cases. Each tablespoonful contains 13.2% of non-bitter aqueous extract of Cascara Sagrada.

The dose of Petrolagar with Cascara is one tablespoonful two to three times daily—gradually diminished. It has the advantage of exceptional palatability and continued effectiveness despite prolonged use.

Petrolagar with Cascara is available in 16 ounce bottles at all pharmacies and in the special Hospital Dispensing Unit at hospitals.



*Petrolagar—The trademark of Petrolagar Laboratories, Inc., for its brand of mineral oil emulsion—liquid petrolatum 65cc. emulsified with .5 Gm. agar in a menstruum to make 100 cc.

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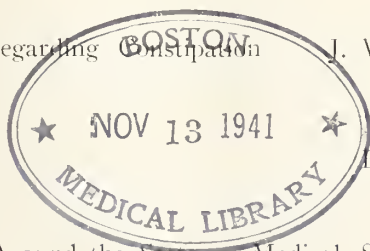
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Are the Neuritic Symptoms of Pregnancy due to deficiency of Vitamin B₁ (thiamine)

SUCH neuritic symptoms of pregnancy as pains in arms and legs, muscle weakness, and paralysis of the extremities may result from a shortage of the antineuritic vitamin, recent investigations appear to show. Strauss and McDonald report that polyneuritis of pregnancy is a dietary deficiency disorder similar to beriberi, responding to treatment with dried brewers' yeast, rich in vitamin B₁ (thiamine). Wechsler, Hirst, Luikart, Gustafson, and other authorities observe that the avitaminosis is probably the result of hyperemesis gravidarum.

Vorhaus and associates, after administering large amounts of vitamin B₁ (thiamine) to 250 patients having various types of neuritis, including that of pregnancy, observed improvement, ranging from partial relief of pain to complete recovery, in about 90 per cent.



Consisting of nonviable yeast, Mead's Brewers Yeast Tablets offer not less than 50 International vitamin B₁ units and 42-50 Sherman vitamin G units per gram. Each tablet furnishes 20 International vitamin B₁ units and 20 Sherman vitamin G units. Supplied in bottles of 250 and 1,000 tablets, also in 6 oz. bottles of powder.

MEAD JOHNSON & COMPANY, Evansville, Ind., U. S. A.

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Woman's Auxiliary

There is a Council-Accepted high potency fish liver oil available that is advertised only to the medical profession and not exploited to the laity. It is called **OLEUM PERCOMORPHUM--**



(liquid and capsules) Specify **MEAD'S.**

Yours for Keeping the Faith
MEAD JOHNSON & COMPANY
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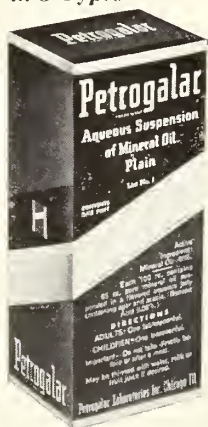
—Mead Johnson & Company, Evansville, Ind., U. S. A.—



For the Stay-at-Home

★ ★ **Petrogalar** *

★
Available at all
Pharmacies
in 5 Types



Shut in—No exercise—Appetite off—Sluggish bowel, all suggest the use of Petrogalar to assist Bowel Habit Time.

Petrogalar Plain adds unabsorbable fluid to the bowel content to encourage regular, comfortable elimination by purely mechanical means, free of habit-forming tendencies.

Children and adults alike enjoy the delightful flavor of Petrogalar. It is easy to take, either from a spoon or in water, as desired.

*Trade Mark. Petrogalar is an aqueous suspension of pure mineral oil each 100 cc. of which contains pure mineral oil suspended in an aqueous jelly containing agar and acacia.

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